

## *Best Management Practices*

### **Black Turfgrass Ataenius**

**Background:** The black turfgrass ataenius is a small white grub that causes sporadic, severe damage to golf courses in the cool-season turfgrass zones. Fairways, approaches, tees, and greens may be infested. Occurrence tends to be spotty, with only certain golf courses in a vicinity affected. Damage to home lawns is uncommon.

The grubs commonly damage bentgrasses, annual bluegrass and Kentucky bluegrass on golf courses, feeding on living plant roots as well as decaying organic matter. The black turfgrass ataenius is native to North America where it occurs in all states east of the Rocky Mountains as well as in California, Oregon and Washington. Damage to golf courses occurs mainly in the north eastern segment of the United States, from New England and the mid-Atlantic states and from Kentucky and Missouri north to the Great Lakes, and along the Western Coast.

**Description:** The black turfgrass ataenius has two generations per growing season in Ohio and further south, and one generation in the Great Lakes states, northern New York and New England. In the latitude of southern Ohio, injury appears about mid-June and mid-August, coinciding with the first and second annual broods of grubs. In more northern regions where there is only one generation per year, damage shows up in July and August. Adult black turfgrass ataenius are small, shiny black beetles 3/16 inch to 0.1 - 0.2 inch long and about half as wide, with distinct longitudinal grooves on the wing covers. Newly emerged adults are reddish brown but darken in a few days. Eggs are pearly white and tiny, less than 1/32 inch. Newly hatched grubs are 1/10 inch long and hard to see. Second instars are 3/16 inch and mature 3rd instars are 3/8 inch. Mature black turfgrass ataenius grubs are often mistaken for young grubs of Japanese beetles or masked chafers but the black turfgrass ataenius grub has two distinctive, pad like structures at the tip of the abdomen just in front of the anal slit. When mature, the grubs burrow down 1/2-3 inches into the soil and excavate a cavity in which to pupate. The pupae is small, about 3/16 inch long with the wings and legs folded close to the body.

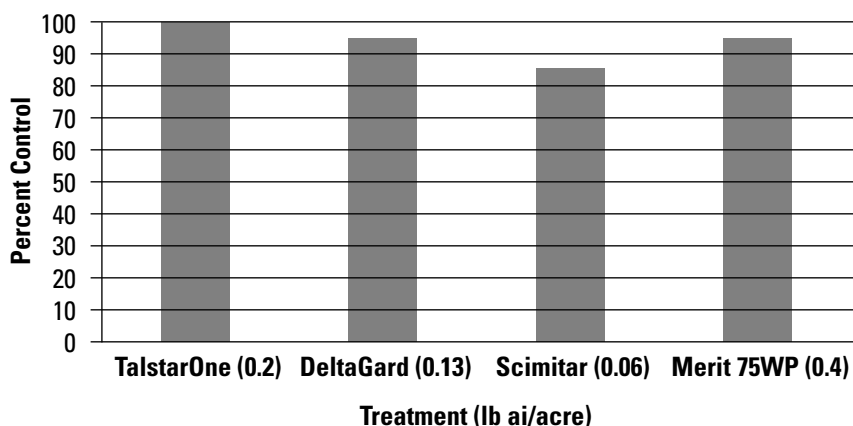
Adults overwinter along the edges of wooded roughs or in wood lots taking shelter under leaves, pine needles, piles of grass clippings or other debris. In areas where two generations occur each year, adults usually begin to emerge after several warm days in late March through early May. Usually their appearance coincides with the blooming of crocus and eastern redbud. Egg-laying begins in early May and may continue through mid-June. The beetles land on the turf and quickly burrow down. Clusters of 11-12 eggs are laid within small cavities near the soil-thatch interface. Eggs hatch in about a week and the grubs take about 4 weeks to mature.

**Damage:** Damage caused by grub feeding or predators feeding on grubs typically shows up in June. The second generation of adults emerges in late June to early July. These adults mate and lay eggs in July and early August, producing a second generation of grubs which damages turf in late August and September. In northern regions, where only one generation occurs, adults lay eggs in late June and damage occurs in July and August. Injury appears as wilting and thinning of the turf, despite adequate water. This is a result of stunted and damaged root systems. While black turfgrass ataenius grubs are small they are often found in concentrations of 200-300 grubs per square foot. Birds, skunks and moles will tear up the turf to eat the grubs.

**Management:** Preventative control of black turfgrass ateniens is warranted on golf courses having recurring problems. One option is to use a long-residual adulticide to control the adult beetles before they lay eggs. Apply Talstar® GC flowable insecticide/miticide at 0.25-0.5 fl. oz. per 1000 sq. ft. or Talstar® GC granular insecticide or Talstar® EZ Golf granular insecticide at 1.15-2.3 lbs per 1000 sq. ft. In areas with two generations, applications should be made in late April / May and July to control the first and second generation of black turfgrass ateniens adults, respectively. The May application should be timed to immediately precede or coincide with the full bloom stage of Vanhoutte spirea (*Spirea vanhouttei*) or with the horse chestnut (*Aesculus hippocastanum*). The July application should be timed to immediately precede or coincide with the blooming of Rose of Sharon (*Hibiscus syriacus*). Infestations of black turfgrass ateniens are often localized within a few fairways that can usually be spot treated. Treat areas where adults are seen swarming and areas with a history of black turfgrass ateniens infestations.

**Control of Black Turfgrass  
Ateniens with TalstarOne™  
Multi-insecticide**

Trial Conductd by Dave Shetlar,  
Ohio State University 1999



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