

Q&A

Black Turfgrass Ataenius (BTA) control

Question:

"...Last year at the end of August, we started to see a lot of BTA activity on our greens. This year we started to see them again on the 13th of April. The following week we had some very cold mornings and we started finding a lot of dead BTAs. There are still a lot of live ones now but not nearly as many as we saw in the middle of the month. According to the info I have, the best time to treat for overwintering adults is in the first week of May. What I am wondering is, are we too late?..."

Clark Weld, Superintendent
Blue Heron Pines Golf Club, Pomona, NJ

Response:

By Michael Villani

Unlike other scarab species, the adult stages of BTA are purely reproductive. They do not eat and have a limited life span of 7 - 10 days. Because of this, control strategies targeted at adults have a limited window of opportunity. However, like other scarab species, BTA grub stages are usually active from hatch in late spring through the early fall, so turfgrass managers have a better chance of controlling BTAs in this stage than when they are adults.

Answers to your observations and questions:

The early activity that you saw in April indicates that there were a fairly large number of overwintering adults, not unexpected since the East Coast had a mild winter.

The large number of dead adults following the cold spell may have been due to the cold temperatures, or their normally short life span. The uncertainty about the cause of death for the adults leaves two additional questions that should be considered. Were the dead adults males or females? And if they were female, had they already deposited their eggs?

Since female BTAs usually remain in the soil after swarming, most of the dead adults found on the surface are likely to have been males and the apparent high mortality of adult BTAs will probably have little effect on the number of hatched grubs. Further, if dead females were found, they probably had already laid

their eggs, so again the high number of dead adults will probably have little effect on later grub populations.

Control strategies for BTA

Control measures for Black Turfgrass Ataenius (BTA) have historically been directed at both the adult and the larval grub stages.

Adults: Early intervention with surface active insecticides such as chlorpyrifos aimed at the adult BTA populations is intended to lower the number of adults by controlling them as they move through the thatch and the upper soil layer. The objective is to reduce the number of adults capable of producing grubs. There are some factors complicating this control strategy that turfgrass managers should consider, however.

First, BTA adults tend to be attracted to very high organic component soils and thatch. This high level of organic matter tends to bind up traditional surface active insecticides and reduce the efficacy of these treatments.

Second, recent research that was done to correlate observable adult scarab populations with later in-soil grub populations has found no significant relationship between the two. Site conditions, natural predators, egg survival rates, hatch rates, and grub survival rates appear to be the better determinants of later grub populations, so early intervention for adults may not produce significant reductions.

Grubs: Because BTA grubs hatch in late spring, large summertime BTA grub populations can easily be missed if they are not being looked for, and feeding damage can easily be mistaken as a host of similar symptomologies are often present.

If BTA grubs are the only significant scarab grub species that is a pest, then single applications of conventional short-term high-knockdown insecticides, like bendiocarb (Turcam), should be used. If the site is subject to multi-species grub infestations then a long-term insecticide like imidacloprid (Merit) should be applied, so that all of the grub species can be controlled over the several months of their activity.

Bio-controls: Few if any effective bio-controls are currently labeled for control of BTA grubs, although some parasitic nematodes have shown activity.

TGT Advice: As always, to meet federal labeling law requirements make sure that the label of the control product chosen, whether traditional or bio-control, specifically mentions BTA as a susceptible species before making any application.