## Where Are All The Grubs?

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ost everyone would likely agree **LVL** that this growing season was rather unusual to say the least. Much of Wisconsin experienced abnormally high temperatures, at least a couple of days above 100 F°. And to make matters even worse, most of the lower half of the state was, and continues to be, in a drought. Just like we humans (and plants), insects are extremely dependent on water for survival. So, it is not too difficult to understand why we may not see the large numbers of grubs where soil moisture was lacking even though adult populations may have been high in June and July.

Japanese beetle adult females preferentially seek-out areas of turf that have adequate soil moisture to ensure larval survival. Consequently, areas of turf that were irrigated or happened to receive rainfall (resulting in adequate soil moisture) during the drought would have been highly attractive to egg-laying Japanese beetle adult females.

Conversely, those areas that lacked soil moisture would likely be devoid of grubs as the beetles would have avoided laying eggs in these areas. So



Often Grubs Can Be Found By Looking For Skunk Or Other Varmit Damage. (Photo Courtesy of Steven Biehl, Golf Course Superintendent Naperville Country Club, Naperville, IL)

the question remains, "where are the grubs?" There is no simple answer to this question; however, as stated earlier, Japanese beetle adults will preferentially lay eggs in turf that has adequate soil moisture, therefore we would expect grubs to be located in these areas.

Fortunately, many turfgrass managers employ a preventative grub control program where they apply a preventa-



Turf Suffering From Grub Damage Pulls Back Easily Revealing Grubs Below. (Photo Courtesy of Steven Biehl, Golf Course Superintendent Naperville Country Club, Naperville, IL)

tive white grub control product to the high profile turfgrass areas such as tee boxes, fairways and green surrounds. These turf areas commonly receive irrigation, and are thus highly favorable areas for grubs.

Because such areas are typically protected with a preventative insecticide treatment and the other turf areas lack adequate soil moisture, the overall grub populations and subsequent feeding damage will likely be minimal.

However, for those turfgrass managers that did not apply a preventative insecticide treatment to irrigated or to areas of turf that did receive rainfall and adequate soil moisture existed, white grub populations would likely be high.

To determine if white grubs are present, merely pull-back the turf to verify that grubs exist. If present, consider treating them with a corrective white grub control product such as Arena (clothianidin), or Dylox (trichlorfon) or Sevin (carbaryl). Be sure to apply post-treatment irrigation to move the insecticide into the soil where the grubs are loctated.