

White Grub Management 2015

June 16, 2015

The white grub season is upon us!

White grubs are among the most destructive insect pests of turfgrasses. They feed below the soil surface on the roots and rhizomes of all commonly grown turfgrass species and cultivars, and are capable of destroying the entire root system of the plant. When abundant, white grubs can rapidly destroy large areas of turf.

White grubs are the larval stages of scarab beetles (Family Scarabaeidae). There are many scarab species in the U.S, but fortunately only a relative few cause significant damage to turf. These include the masked chafers (*Cyclocephala* spp.), Japanese beetles (*Popillia japonica*), European Chafers (*Rhizotrogus majalis*), Oriental Beetles, (*Exomala orientalis*), Asiatic Garden Beetles (*Maladera castanea*), Green June Beetles (*Cotinis nitida*), May/June Beetles (*Phyllophaga* spp.) and the black turfgrass ataenius (*Ataenius turfgrass ataenius* cause significant turf damage on a regular basis. Each of these scarab species has a unique biology and life cycle requiring a specific management approach.



Photo: Glen Obear

Effective white grub control depends on proper timing of the application and moving the insecticide down to the root zone where the grubs are feeding. Most of the preventively-applied insecticides including chlorantraniliprole (Acelepryn), clothianidin (Arena), imidacloprid (Merit), and thiamethoxam (Meridian) are systemic in nature and will be taken up by the plant and translocated to the root zone where the grubs are active. Curative insecticides such as carbaryl (Sevin) or trichlorfon (Dylox) must be watered in for acceptable control. Moving the insecticide into the root zone involves applying ½ inch of water immediately after application.

Thatch plays an important role in reducing the efficacy of turf insecticides applied for white grub control. If the thatch layer exceeds ½ inch, light aeration and increased post-treatment irrigation will enhance insecticide penetration and should improve white grub control. In problem areas, such as those with thick thatch layers, repeated irrigations may be necessary every three to four days to continue moving the insecticide into the soil. When white grubs are deeper in the soil, curative treatments are more effective if a retreatment irrigation of 1/2 inch is applied 48 hours before the insecticide application. This will encourage grubs to move closer to the soil surface and enhance the level of white grub control.

Fred Baxendale, Professor, Extension & Research Entomologist, fbaxendale1@unl.edu