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To: Rains County Leader

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### White Grubs in Texas Turfgrass

White grubs are the larval stage of insects commonly known as May or June Beetles (or June bugs). There are many species in Texas but only a few commonly damage turfgrass and other cultivated plants. The most important turfgrass infesting white grubs in Texas are the June beetle.

White grubs, sometimes referred to as grub worms, injure turf by feeding on the roots and other underground plant parts. Most lawn damage occurs during the summer and fall months. Severely damaged turf can be lifted by hand or rolled up from the ground like carpet.

Grub worms require one year completing their life cycle. Once a year, in late spring or summer, adult beetles emerge from the soil to mate. Mated females then return to the soil to lay eggs. Within about two weeks the eggs hatch into small white grubs that feed on grass roots. Adults will then emerge from the pupal stage when environmental conditions are favorable in early to mid summer. Most damage from white grubs occurs during mid-summer to early-fall when the larger larvae are actively feeding.

The June beetle will emerge from the soil and fly at night, usually after a significant rainfall or irrigation. Flight periods may last for several weeks, during which time the mating and egg-laying occur. After mating, female beetles dig 2 to 5 inches into the soil to lay eggs. Each female can lay up to 30-40 eggs, which hatch in approximately two weeks.

White grub damage can be detected by the presence of irregular shaped areas of weakened or dying grass in the lawn. Grubs should be easily found in the top few inches of the soil, in the turfgrass root zone. Finding more than five grub per square foot justifies treatment, although some lawns with even higher numbers of grubs may show no damage.

Proper timing of chemical application is critical to suppressing white grubs. Ideally chemicals should be applied within six weeks of egg laying. Once you see large amounts of June bugs flying, wait 5-6 weeks before treating for grub worms.

The insecticides imidacloprid and halofenozide are used most today for grub control. Imidacloprid is most effective against small and medium-sized grubs but may

kill some grubs larger than ½ inch long. Imidacloprid trade names include Merit®, Bayer Advanced Lawn™ Season Long Grub Control and Scott's® Grub-Ex®.

The lethal effects of the insect growth regulator halofenozide are limited to early white grub life stages. This chemical is ineffective if applied too late, after grubs have reached the third-instar life stage. Halofenozide trade names include Mach 2, Spectracide®, Grub Stop™, and Hi-Yield® Kill-a-Grub™.