



The Sugarcane Beetle in Louisiana Sugarcane

The sugarcane beetle, *Euetheola humilis* (Burmeister) (Coleoptera: Scarabaeidae), is a sporadic pest of young sugarcane in Louisiana. The species can also attack seedling corn and rice, sweet potatoes, turfgrass and numerous noncrop grass species. The species is common throughout the southeastern U.S. and has been reported as far north as Ohio. Infestations in sugarcane are most apparent in spring from mid-April to early June when adults emerge from underground over-wintering sites and begin feeding, mating and laying eggs in sugarcane fields.

Both larvae and adult sugarcane beetles can be found in sugarcane fields (Figure 1), but only the adults are damaging. Injury occurs when sugarcane beetle adults feed on young sugarcane tillers just below the soil surface. The feeding causes a ragged, bean-sized hole at the base of tillers (Figure 2). Sugarcane beetle feeding kills individual tillers and results in the formation of “deadhearts” aboveground. Sugarcane beetle injury can be distinguished from deadhearts caused by sugarcane stem borers, which will have a pinhead-sized hole in aboveground parts of young tillers. The appearance of numerous deadhearts and stunted, thin stands of sugarcane are indicative of sugarcane beetle infestations (Figure 3). Digging out deadhearts and examining tillers for beetle feeding can confirm an infestation, although adult beetles may not be present. Larvae or “white grubs” may also be found underground in sugarcane fields. While white grubs of other beetle species are considered major pests of sugarcane in Australia, the larvae of the sugarcane beetles feed on decaying plant matter rather than new tillers. Sugarcane beetle larvae are therefore not detrimental to sugarcane.

Impacts of sugarcane beetle injury on sugarcane yields have not been comprehensively studied because the infestations have historically been sporadic and unpredictable. Loss of sugarcane tillers in the spring is generally considered to have minimal or no impact on sugar yield. Studies have shown losses of greater than 30% of tillers in May and early June had no impact on yields at harvest. Spring sugarcane produces far more tillers than will grow into millable stalks. New tillering can also replace those lost to beetle feeding. Digging beneath the soil of deadhearts caused by the sugarcane beetle can often reveal new tillers growing just below the point of injury.



Figure 1. Sugarcane beetle larva (left) and adult (right) unearthed beneath injured sugarcane. Photo by Blake Wilson.



Figure 2. Adult sugarcane beetle injury to the base of sugarcane tillers. Photo by Blake Wilson.



Figure 3. Sugarcane beetle feeding symptoms. Injured tillers or “deadhearts” (left) and thin, stunted sugarcane (right). Photos by Blake Wilson.

Affected sugarcane fields will likely recover from injury as long as some healthy tillers remain. Sugarcane beetle damage to sugarcane stalks after formation of internodes has not been reported. Emergence of the summer generation of sugarcane beetle adults occurs in the late summer and early fall. These adults may attack plant cane before moving underground to overwinter, but this injury is likely of little importance.

No sugarcane beetle control methods have been identified. Applications of insecticides are not likely to be effective as beetles are protected underground. Differences in infestation levels among

varieties were not observed in past studies. Production practices that promote vigorous growth and tillering will limit impacts of sugarcane beetle infestations on sugarcane yield. These include good drainage, maintaining healthy soil fertility and pH, and effective weed control. Avoiding excessive amounts of sugarcane trash or bagasse in soils is also thought to limit sugarcane beetle feeding activity. Past studies have suggested that removing grass sod or pastures that are adjacent to sugarcane fields may reduce local populations, but this approach may not be practical in many situations. If infestations are observed, monitoring infested fields for stand recovery as the crop matures in midsummer is advised.

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