

BILLBUGS IN ROW RICE



Life Cycle

The rice billbug, also known as the snout beetle, is a member of the Curculionidae family of insects. Specimens collected from Louisiana have been identified as *Sphenophorus pertinax*, but other species in the genus *Sphenophorus* may also attack rice. Rice billbugs complete one generation per year, and adults overwinter in protected areas along field edges. Emergence typically begins in April and continues to May. Females will chew holes at the base of a rice plant and deposit a single egg within the stem or below the soil surface. Once larvae emerge, they begin to feed on inner stem tissues above and below the soil surface. Larvae will pupate inside the plant stem and emerge in late summer. Adults are typically dispersed by walking and will fly when disturbed. Larvae are about 1/2-inch-long white, legless grubs with a red-orange head capsule. Adults are 3/4-to-1-inch-long large brown to black beetles with a pronounced snout.



Rice billbug adult. Photo by N. Bateman, University of Arkansas



Rice billbug larva. Photo by B. Wilson, LSU AgCenter



Rice whitehead. Photo by B. Wilson, LSU AgCenter



Billbug feeding cavity filled with frass. Photo by B. Wilson, LSU AgCenter

Injury

Billbugs are pests of various crops, including wheat, barley, corn and sugarcane. Adult feeding occurs at the bases of young rice plants and at leaf whorls. Adult billbug feeding injures the hearts of rice tillers, causing new leaf death or a dead heart. Larval feeding occurs inside the root crown and lower stem, often resulting in plant death. Feeding cavities are filled with powdery frass. The primary symptom of billbug infestations is the presence of "whiteheads." Whiteheads are completely blank panicles and are also a symptom of stem borer infestations. Billbugs cannot survive in flooded conditions and are often found on or near levees in flooded rice. Symptomology in row rice can occur anywhere in a field where irrigation water does not accumulate for extended periods of time. Field edges closest to furrow irrigation pipe and high sides of the field often exhibit symptomology first.

Management and Scouting

No formal thresholds or scouting procedures have been established for billbug infestations in row rice. Billbug adults typically reside near the base of the plant, making scouting difficult. Larvae can be found by digging up injured tillers and dissecting the stems near the root crowns. Once symptomology appears, injury to the rice has already occurred and management options may not produce an economic benefit. Limited information is available on the efficacy of foliar treatments or insecticidal seed treatments alone or in combinations. Temporarily flooding fields may produce some benefit; however, adequate water coverage over affected areas is often not possible due to the nature of row rice production.

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