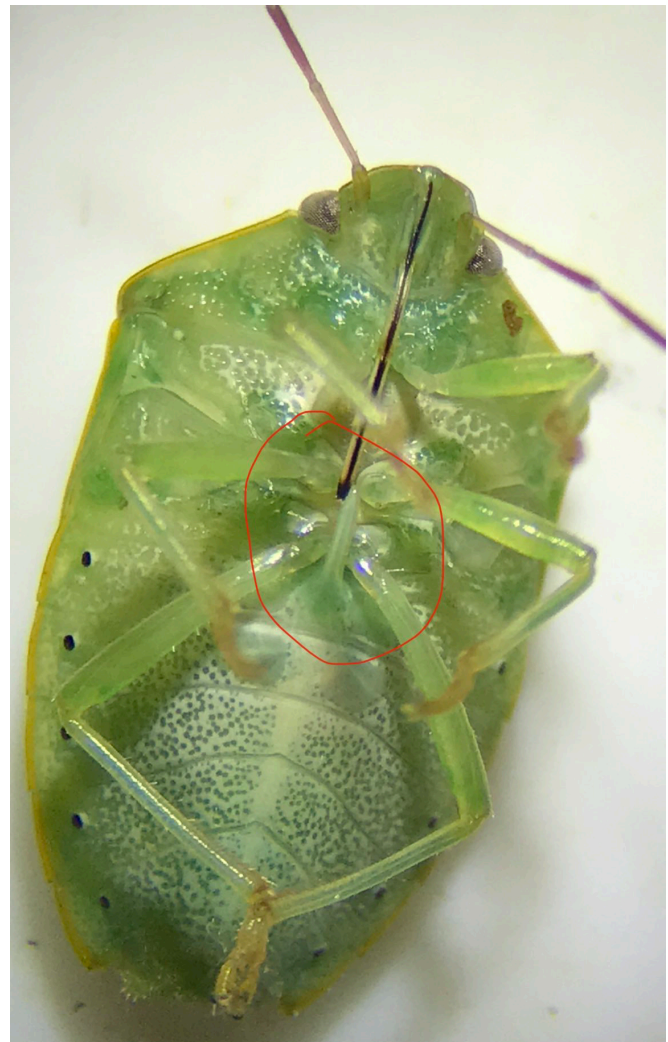


# Pests of Alabama Soybeans: Redbanded Stink Bugs

► Stink bugs (Hemiptera: Pentatomidae) are consistent pests of soybeans in Alabama. While the “traditional” stink bug complex is common, the invasive redbanded stink bug (*Piezodorus guildinii*) poses the most serious threat to soybean production. Redbanded stink bugs are native to Central and South America and have difficulty establishing north of the Gulf states of North America.

An adult redbanded stink bug is a small (0.3 to 0.4 inches), green shield bug with a red-, purple-, or orangish-colored stripe across the back of its thorax. The key characteristic of adult redbanded stink bugs is the fixed spine that arises from the abdomen. Immature redbanded stink bugs are somewhat distinct, as they are more of an oval shape than most other immature stink bugs. Early instar redbanded stink bugs have a black head and red abdomen, while late instars develop a green body with black and red markings.



## Distribution and Life Cycle

Redbanded stink bugs are primarily attracted to leguminous plants such as soybeans, clovers, vetches, peas, and other beans or lentils. One key difference between red-banded stink bugs and other species is that the redbanded stink bug does not go through diapause.



During the winter, redbanded stink bugs will hide under stubble or leaf litter during cold periods but will continue to feed and reproduce during the winter. Crimson clover is Alabama's most important winter/spring host for redbanded stink bugs.

Under ideal conditions, redbanded stink bugs can undergo a complete life cycle in 37 to 39 days. Additionally, adults can live 2 to 3 months in their natural environments. Like most stink bugs, immature redbanded ones go through five nymphal instars. Each nymphal stage can last 3 to 13 days, depending on environmental conditions. The first instar stage is the shortest, while the third instar takes the longest. In the first two instars, redbanded stink bug nymphs remain clustered and do not feed on the plants. However, at the third instar, feeding and dispersal begin to occur. During the summer, the immature life stage typically lasts 21 to 30 days before adulthood. After about 20 days, female adults begin laying eggs, primarily on pods but also on leaves and stems. Redbanded stink bug egg masses are unique from "traditional" stink bug egg masses. Gray, barrel-shaped eggs are laid in two parallel rows, averaging 15 to 20 eggs per mass. After eggs are laid, nymphs begin to hatch after 7 or 8 days, and another generation begins.



## Pest Status

Redbanded stink bug is one of Alabama soybeans' most economically damaging pests. Feeding can occur on leaves, stems, and flowers. Economic damage is caused by feeding on developing seeds in pods. Redbanded stink bugs feed by inserting piercing and sucking mouthparts into feeding sites, injecting the plant tissue with enzymes and breaking down healthy plant tissue. Redbanded stink bug damage can lead to reduced yields from delayed maturation of pods and pod and flower abortion. Pods fed on and damaged cause the individual damaged seeds to shrink and dry up, directly reducing yields. In addition to direct yield loss, redbanded stink bugs affect soybean seeds through reduced seed quality. Feeding from redbanded stink bugs can result in delayed harvest, lower seed weight, decreased germination, and seed deformation.





## Management Strategies

The aggressive feeding habit and the ability to damage seed longer than other stink bugs make redbanded stink bug management critical in fields they have infested. Historically, redbanded stink bugs are more consistent in southern Alabama and occasionally in central Alabama. Under rare circumstances, they infest soybean fields in the northern part of the state. Proper scouting with a sweep net is necessary for monitoring. Due to the nature of redbanded stink bugs, ensure that sweep samples cover the lower portion of the canopy where seed develops first on indeterminate varieties. An accurate count of populations in the field is critical. Redbanded stink bugs tend to initially infest early planted soybean fields at lower levels, before heavily infesting later-planted fields at the end of the season. In addition to causing more damage than other stink bugs, redbanded stink bugs can also cause damage at later growth stages (R7) if conditions are not conducive to seed drying down. The current recommended threshold and insecticide options are in the “Soybean Insect, Disease, Nematode, and Weed Control Recommendations” (IPM-0413) on the Alabama Extension website, [www.aces.edu](http://www.aces.edu).



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