

Update on the Cotton Jassid: A New Pest of Concern in Texas Cotton

Suhas Vyavhare¹, David Kerns², Jose Santiago-Gonzalez³, and Patrick Porter⁴

We are closely monitoring the recent invasion of cotton jassids, *Amrasca biguttula* (Ishida) (also known as the two-spot cotton leafhopper), in Florida, Georgia, Alabama, and South Carolina. We are also keeping a close watch for this pest in Texas. In Texas, this pest has been detected on hibiscus in big-box store nurseries in Bellmead, Cedar Park, College Station, Corpus Christi, El Paso, Harlingen, Longview, McAllen, Rosenberg, San Antonio, Victoria, Waco, and Weslaco. There is also a probable detection of jassids in cotton in Fort Bend County, although this finding has not yet been fully confirmed. It appears that infested hibiscus plants were shipped from southern Florida for sale throughout much of the southern U.S. The Texas Department of Agriculture is taking steps to eliminate this potential source of cotton jassids, and the situation is being investigated by USDA-APHIS. Whether or not this incident results in the establishment of this pest in Texas remains to be determined.



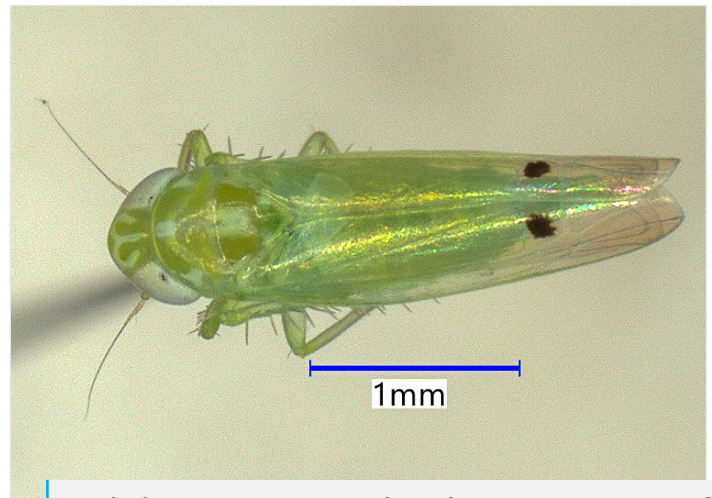
Cotton jassids. (Photo courtesy of Scott Graham, Auburn University)

Description

Adult cotton jassids measure approximately 1/8 of an inch (2 to 3 mm) and are pale green with yellowish-green wings. They can be distinguished from other leafhopper species by a prominent black spot on the apical area of each forewing and, often, by two dark spots on either side of the head. The markings can sometimes be faint or absent. Therefore, definitive morphological identification requires dissection and examination of the male genitalia by a specialist, or confirmation through molecular testing.

The eggs are yellowish-white, oblong, and are less than 0.04 inches (1 mm) long, nearly invisible without magnification. Eggs are laid within the veins and midribs of leaves.

Newly hatched nymphs are wingless, pale green, and highly agile, often scuttling sideways or dropping from plants when disturbed. They are very small, typically less than 0.05 inches (1.27 mm) long, and are difficult to distinguish from nymphs of other species. When disturbed, both adults and nymphs exhibit distinctive sideways movements and quick hopping behavior.



Adult cotton jassid. (Photo courtesy of Isaac Esquivel, University of Florida)



Jassid nymph. (Photo courtesy of Isaac Esquivel, University of Florida)

Established Distribution

The cotton jassid's native range extends from Iran to Japan and Indonesia. It is a serious economic pest of cotton in the Indian subcontinent. In 2022 and 2023, it was reported as a serious pest of cotton in West Africa. It was found in Puerto Rico in 2023, followed by other Caribbean islands and Florida in 2024. By 2025, infestations had been reported in multiple counties in the United States in Georgia, Alabama, and South Carolina.

Life Cycle

Majority of the biological information comes from research conducted in the native range of the pest. Per the literature, female cotton jassids lay multiple eggs (14 to 60), which hatch in approximately 1 week. The nymphal stage lasts 5 to 16 days, and adults live for up to 5 weeks. The total life cycle duration varies with temperature and humidity. For example, in India, generation time ranges from 15 to 46 days, allowing up to 11 generations per year. This is largely due to the continuous availability of host plants in warmer climates.

Host Plant Range

The cotton jassid has a fairly broad host plant range, primarily within the families Malvaceae, Fabaceae, Asteraceae, and Solanaceae. This includes cotton, okra, peanuts, soybeans, sunflowers, eggplants, potatoes, and many ornamental plants. When the pest invaded Florida, it was first detected in high numbers infesting okra.

Cotton Injury and Symptoms

Nymphs and adults feed on the undersides of leaves, extracting sap with their piercing-sucking mouthparts and causing curling, yellowing, and bronzing of foliage. These symptoms are collectively referred to as “hopperburn.” Initial observations from Georgia indicate that jassid infestations and associated plant injury appear quickly after colonization, and are most severe along field margins. Under heavy infestations, hopperburn symptoms extend throughout the field, leading to premature defoliation. Severe feeding stunts plant growth and can cause the premature drop of fruiting structures, resulting in yield and quality losses. In India, this pest is reported to cause up to 50 percent yield losses in cotton, and is known to be extremely difficult to control. This species of leafhopper is not confirmed to be a vector of any plant pathogens. The full impact on yields in U.S. cotton is still uncertain. Extension experts and researchers across the Southeast U.S., where the insect has been found to infest cotton fields, are actively investigating the impact of this pest and potential control options.



Hopperburn symptoms.
*(Photo courtesy of Scott Graham,
Auburn University)*



Hopperburn and leaf reddening.
*(Photo courtesy of Scott Graham,
Auburn University)*

Treatment Decisions and Insecticide Efficacy Data

Based on the initial studies done in Alabama and Georgia, the recommended treatment threshold for cotton jassids is one to two nymphs per leaf. Scouting should focus on the undersides of mainstem leaves at the third, fourth, or fifth node from the top of the plant. The threshold applies when injury symptoms are observed, which helps confirm correct identification as other leafhopper species do not cause similar symptoms. Populations and damage typically appear first along field edges before spreading inward. The 'hopperburn' symptoms could be confused with Verticillium wilt or severe potassium deficiency at first glance. It is important to look at the underside of leaves for insect presence. Although insecticide efficacy evaluations are ongoing, Bidrin, Sivanto Prime, Sefina, and Carbine have shown promise in Georgia and Alabama.

¹ Associate Professor and Extension Entomologist, Department of Entomology, College of Agriculture and Life Sciences, Texas A&M University, Texas A&M AgriLife Extension Service

² Professor, Extension Entomologist and Associate Department Head, Department of Entomology, College of Agriculture and Life Sciences, Texas A&M University, Texas A&M AgriLife Extension Service

³ Assistant Professor and Extension Entomologist, Department of Entomology, College of Agriculture and Life Sciences, Texas A&M University, Texas A&M AgriLife Extension Service

⁴ Professor and Extension Entomologist, Statewide IPM Coordinator, Department of Entomology, College of Agriculture and Life Sciences, Texas A&M University, Texas A&M AgriLife Extension Service



Texas A&M AgriLife Extension is an equal opportunity employer and program provider.