CALIFORNIA DEPARTMENT OF FOOD & AGRICULTURE

California Pest Rating Proposal

***Amrasca biguttula* (Ishida): Cotton jassid**

Hemiptera: Cicadellidae

Current Rating: Q

Proposed Rating: A

Comment Period: 10/22/2025 – 12/06/2025

Initiating Event:

Amrasca biguttula is a pest of cotton, grapevine, okra, tomato, and other crops. It is established in the southeastern United States and it was recently intercepted in California on hibiscus from Alabama. This insect has not yet been through the pest rating system. Therefore, a pest rating proposal is needed.

History & Status:

Background: *Amrasca biguttula* is a polyphagous leafhopper. Its reported hosts represent at least six plant families and include cotton, grapevine, tomato, okra, eggplant, sunflower, and hibiscus. (Cabrera-Asencio et al., 2023; Ghosh and Karmakar, 2021; Nihal et al., 2019; Vyavhare et al., 2025).

Eggs of *A. biguttula* are laid inside veins or midribs of leaves, are less than 1 mm in length, and are reportedly difficult to see (Schreiner, 2000; Vyavhare et al., 2025). Singh et al. (2018) found development from egg to adult to take approximately 24 days. There are multiple generations per year in warm climates.

This leafhopper is reported to be more abundant on the undersides of leaves (Cabrera-Asencio et al., 2023) and (on a field scale) along field margins (Vyavhare et al., 2025). Abundance on cotton can

reach five individuals per leaf (Nihal et al., 2019). It is active year-round on cotton in India (Patel and Radadia, 2018).

The damage caused by *A*. *biguttula* feeding is of the type referred to as “hopperburn”: Damaged leaves have brown spots and curled edges, and leaves can fall off (Schreiner, 2000). Loss of flowers, squares, and bolls is reported. Regarding impacts to cotton in the southeastern United States, Esquivel et al. (2025) report: “Within less than two weeks, infested plants can deteriorate from slight discoloration to pronounced hopperburn symptoms and, in severe cases, defoliation.” Losses of cotton in Asia are reported to reach 60%.

Damage to okra was described by Michel and Orozco (2025) as including “chlorosis…and burnt areas along the leaf margins.”

Grapevine damage by this pest is reported as “typical” symptoms and sooty mold (Ghosh and Karmakar, 2021). In Niger, abortion of flowers and fruits is reported for okra and/or Guinea sorrel (Akonde et al., 2024).

Amrasca biguttula has not been confirmed to transmit pathogens.

The primary methods of detecting *A*. *biguttula* consist of beating, sweep-netting, and use of sticky cards. No lures or traps specific to this pest are known.

One pathway that may be important for the spread of *A*. *biguttula* in the southeastern United States is the movement of infested hibiscus plants from Florida (Vyavhare et al., 2025). The eggs, which are deposited inside leaf veins and midribs, are difficult to see.

Amrasca biguttula has shown resistance to various pesticides (Nihal et al., 2019). The Alabama cotton jassid update (2025) lists six insecticides that have shown efficacy against this pest.

Worldwide Distribution: *Amrasca biguttula* is reported to be native to Asia. Its distribution includes: **Africa:** Niger; **Asia:** Various, including India; **Caribbean:** Puerto Rico; **Central America:** Honduras: **North America:** United States: Alabama, Florida, Georgia, South Carolina (Cabrera-Asencio et al., 2023; Michel and Orozco, 2025). First report in Western Hemisphere: On cotton in Puerto Rico in 2023 (Cabrera-Asencio et al., 2023). In Florida in 2024. Based on known distribution, the western coast of the United States is likely susceptible.

Official Control: *Amrasca biguttula* is a quarantine pest in Mexico and an A1 pest in Iran (EPPO Global Database).

California Distribution: *Amrasca biguttula* is not known to be present in California.

California Interceptions: *Amrasca biguttula* was intercepted on hibiscus from Alabama in October 2025.

The risk *Amrasca biguttula* poses to California is evaluated below.

Consequences of Introduction:

1) **Climate/Host Interaction:** *Amrasca biguttula* is polyphagous and its hosts include crop and ornamental plants widely grown in California. Its known distribution is largely tropical or subtropical. However, its establishment over a large area of the southeastern United States suggests that a temperate climate is suitable. Therefore, it receives a **High (3)** in this category.

   – Low (1) Not likely to establish in California; or likely to establish in very limited areas.

   – Medium (2) may be able to establish in a larger but limited part of California.

   – High (3) likely to establish a widespread distribution in California.

2) **Known Pest Host Range:** *Amrasca biguttula* is polyphagous. Therefore, it receives a **High (3)** in this category.

– Low (1) has a very limited host range.

– Medium (2) has a moderate host range.

– High (3) has a wide host range.

3) **Pest Reproductive and Dispersal Potential:** *Amrasca biguttula* presumably can fly and it is known to have multiple generations per year. Therefore, it receives a **High (3)** in this category.

– Low (1) does not have high reproductive or dispersal potential.

– Medium (2) has either high reproductive or dispersal potential.

– High (3) has both high reproduction and dispersal potential.

4) **Economic Impact**. *Amrasca biguttula* is reported to be a pest of cotton, grapevines, and tomatoes, important crops in California. Impacts include defoliation and abortion of flowers/fruits. Pesticides appear to be a primary method of control, and pesticide resistance is reported to be a significant problem. This leafhopper is a regulated pest in Mexico and Iran. Therefore, it receives a **High (3)** in this category.

Economic Impact: A, B, C

A. The pest could lower crop yield.

B. The pest could lower crop value (includes increasing crop production costs).

C. The pest could trigger the loss of markets (includes quarantines).

D. The pest could negatively change normal cultural practices.

E. The pest can vector, or is vectored, by another pestiferous organism.

F. The organism is injurious or poisonous to agriculturally important animals.

G. The organism can interfere with the delivery or supply of water for agricultural uses.

Economic Impact Score: High

– Low (1) causes 0 or 1 of these impacts.

– Medium (2) causes 2 of these impacts.

– High (3) causes 3 or more of these impacts.

5) **Environmental Impact**. As mentioned under Economic Impact, growers may treat to control this insect. There may be impacts to native, garden, and ornamental plants. Therefore, *A. biguttula* receives a **High (3)** in this category.

Evaluate the environmental impact of the pest on California using the criteria below.

Environmental Impact: A, D, E

A. The pest could have a significant environmental impact such as lowering biodiversity, disrupting natural communities, or changing ecosystem processes.

B. The pest could directly affect threatened or endangered species.

C. The pest could impact threatened or endangered species by disrupting critical habitats.

D. The pest could trigger additional official or private treatment programs.

E. The pest significantly impacts cultural practices, home/urban gardening or ornamental plantings.

Environmental Impact Score: High (3)

– Low (1) causes none of the above to occur.

– Medium (2) causes one of the above to occur.

– High (3) causes two or more of the above to occur.

Consequences of Introduction to California for *Amrasca biguttula*: High (15)

Add up the total score and include it here.

–Low = 5-8 points

–Medium = 9-12 points

–High = 13-15 points

6) **Post Entry Distribution and Survey Information:** *Amrasca biguttula* is not known to be in California. It receives a **Not established (0)** in this category.

–Not established (0) Pest never detected in California, or known only from incursions.

–Low (-1) Pest has a localized distribution in California, or is established in one suitable climate/host area (region).

–Medium (-2) Pest is widespread in California but not fully established in the endangered area, or pest established in two contiguous suitable climate/host areas.

–High (-3) Pest has fully established in the endangered area, or pest is reported in more than two contiguous or non-contiguous suitable climate/host areas.

Final Score:

7) The final score is the consequences of introduction score minus the post entry distribution and survey information score: High (15)

Uncertainty:

There is uncertainty regarding the potential for *A*. *biguttula* to establish in the Mediterranean climate of California. The potential impacts to grapevine and tomato, important crops in California, are uncertain. The impacts of this leafhopper to these crops are not well-understood and the effects, whether mitigating or aggravating, of the natural enemies and existing management practices in California on those impacts are not known.

Conclusion and Rating Justification:

Amrasca biguttula appears to pose a serious risk to cotton, grapes, tomatoes, and other crops in California. It has already impacted cotton in the southeastern Unites States, where it is widespread. It is not known to be present in California. For these reasons, an “A” rating is justified.

References:

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Vyavhare, S., Kerns, D., Gonzalez, J. S., and Porter, P. 2025. Update on cotton jassid: A new pest of concern in Texas cotton. Texas A7M, Agrilife Extension.

Responsible Party:

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*Comment Period: 10/22/2025 – 12/06/2025

*NOTE:

You must be registered and logged in to post a comment. If you have registered and have not received the registration confirmation, please contact us at permits[@]cdfa.ca.gov.

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Comment Format:

- Comments should refer to the appropriate California Pest Rating Proposal Form subsection(s) being commented on, as shown below.

  Example Comment:
  Consequences of Introduction: 1. Climate/Host Interaction: [Your comment that relates to "Climate/Host Interaction" here.]

- Posted comments will not be able to be viewed immediately.

- Comments may not be posted if they:

  Contain inappropriate language which is not germane to the pest rating proposal;

  Contains defamatory, false, inaccurate, abusive, obscene, pornographic, sexually oriented, threatening, racially offensive, discriminatory or illegal material;

  Violates agency regulations prohibiting sexual harassment or other forms of discrimination;

  Violates agency regulations prohibiting workplace violence, including threats.

- Comments may be edited prior to posting to ensure they are entirely germane.

- Posted comments shall be those which have been approved in content and posted to the website to be viewed, not just submitted.

Proposed Pest Rating: A