Field Guide: Symptoms caused by adults and nymphs of Amrasca biguttula on different hosts in Puerto Rico

Technical Report · August 2025

DOI: 10.13140/RG.2.2.14812.04484

2 authors:

Alondra Nieves
University of Puerto Rico System
1 PUBLICATION **0** CITATIONS
SEE PROFILE

Irma Cabrera
University of Puerto Rico System
51 PUBLICATIONS **131** CITATIONS
SEE PROFILE

Amrasca biguttula Ishida “cotton jassid”

Field Guide: Symptoms caused by adults and nymphs of *Amrasca biguttula* on different hosts in Puerto Rico

Alondra Nieves Santana, Master’s Student
Irma Cabrera Asencio, PhD

Table of Contents

Table of Contents

Acknowledgments

This research was funded by the United States Department of Agriculture's Animal and Plants Health Inspection Service (USDA APHIS PPQ) Project Z-414 (Award no.AP24PPQS&T00C031), entitled "*Dynamics of two invasive pests in Puerto Rico*."

Photo Credits:

Alondra Gabriela Nieves-Santana, Master's Student, Agro-environmental Sciences, University of Puerto Rico (UPR)-Mayagüez.

Irma Cabrera-Asencio, PhD, Agro-environmental Sciences, Agricultural Experiment Station (AES)-Juana Díaz , UPR-Mayagüez.

Elvin Lasalle-Loperena, PhD candidate, Agro-environmental Sciences, University of Puerto Rico (UPR)-Mayagüez.

.

Contents are the responsibility of the authors and do not necessarily represent the official views of the UPR-Mayagüez.

Introduction

- *Amrasca biguttula* Ishida, originally from India, was detected for the first time in the Western Hemisphere in southern Puerto Rico in 2023 (Cabrera-Asencio, Dietrich, & Zahniser, 2023). Surveys have been conducted at various locations across Puerto Rico, including Juana Díaz, Santa Isabel, Salinas, Cabo Rojo, Guánica, Lajas, Sabana Grande, Mayagüez, Las Marías, Isabela, and Moca. In each of these locations, the presence of *A. biguttula* was confirmed on host plants where it was able to complete its life cycle. Reported host plants include *Abelmoschus esculentus* (L.) Moench (okra), *Cucurbita moschata* Duchesne ex Poir.(pumpkin), *Gossypium hirsutum* L. (hybrids cotton), *Helianthus annuus* L. (sunflower), *Hibiscus rosa-sinensis* L. (rose mallow), *Solanum melongena* L. (eggplants), and weeds such as *Amaranthus dubius* Mart. ex Thell. (spleen amaranth), *Malachra capitata* (L.) L. (yellow Leafbract), *Malvastrum sp.* (false-mallow), *Solanum americanum* Mill. (american black nightshade), and *Urena lobata* L. (caesarweed).

Amrasca biguttula Ishida

Leafhopper "cotton jassid" Life Cycle Stages on eggplant and okra

Egg

1st Instar

2nd Instar

3rd Instar

4th Instar

5th Instar

Adult

Crops

Abelmoschus esculentus L *(okra)*

Cucurbita moschata Duchesne *(pumpkin)*

Gossypium hirsutum L (hybrid cotton)

Helianthus annuus L *(sunflower)*

Hibiscus rosa-sinensis L (hybrid rose mallow)

Solanum melongena L (eggplant)

Abelmoschus esculentus L.

A. Early symptoms: chlorosis or yellowing of leaves

B. Early symptoms: some reddening along leaf margins

C. “Hopper burn, ” browning and drying of the leaves

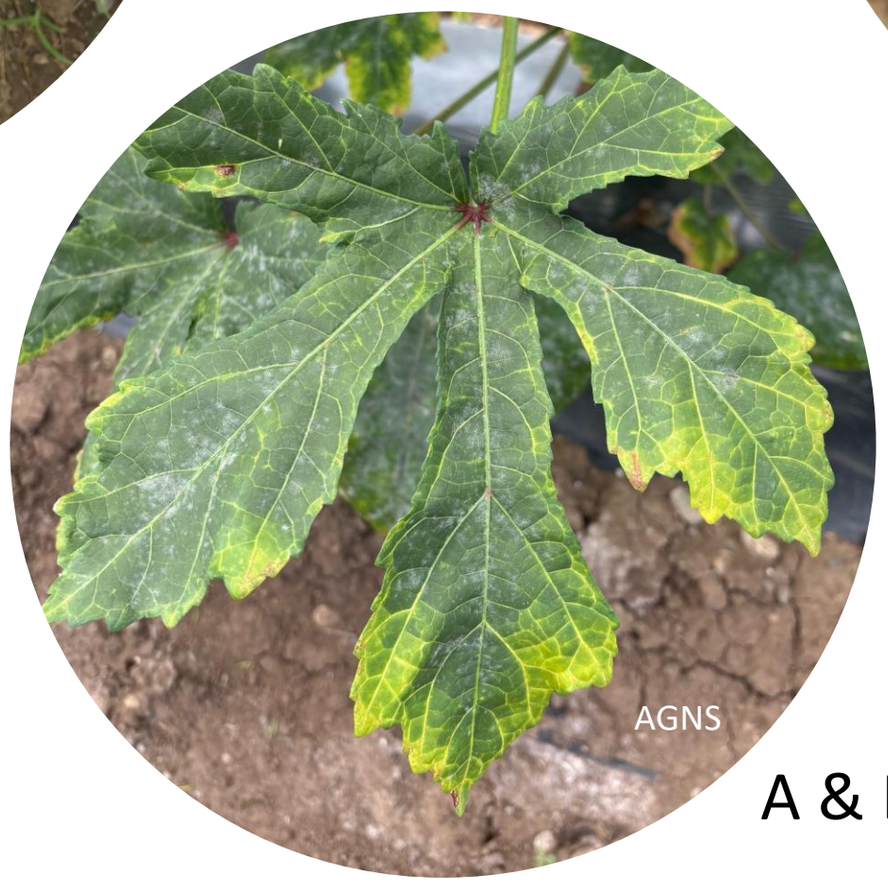
D. Noticeable reduction in leaf size in growing leaves.

E. Amrasca biguttula population

Abelmoschus esculentus L.

A

B



A & D

Abelmoschus esculentus L.

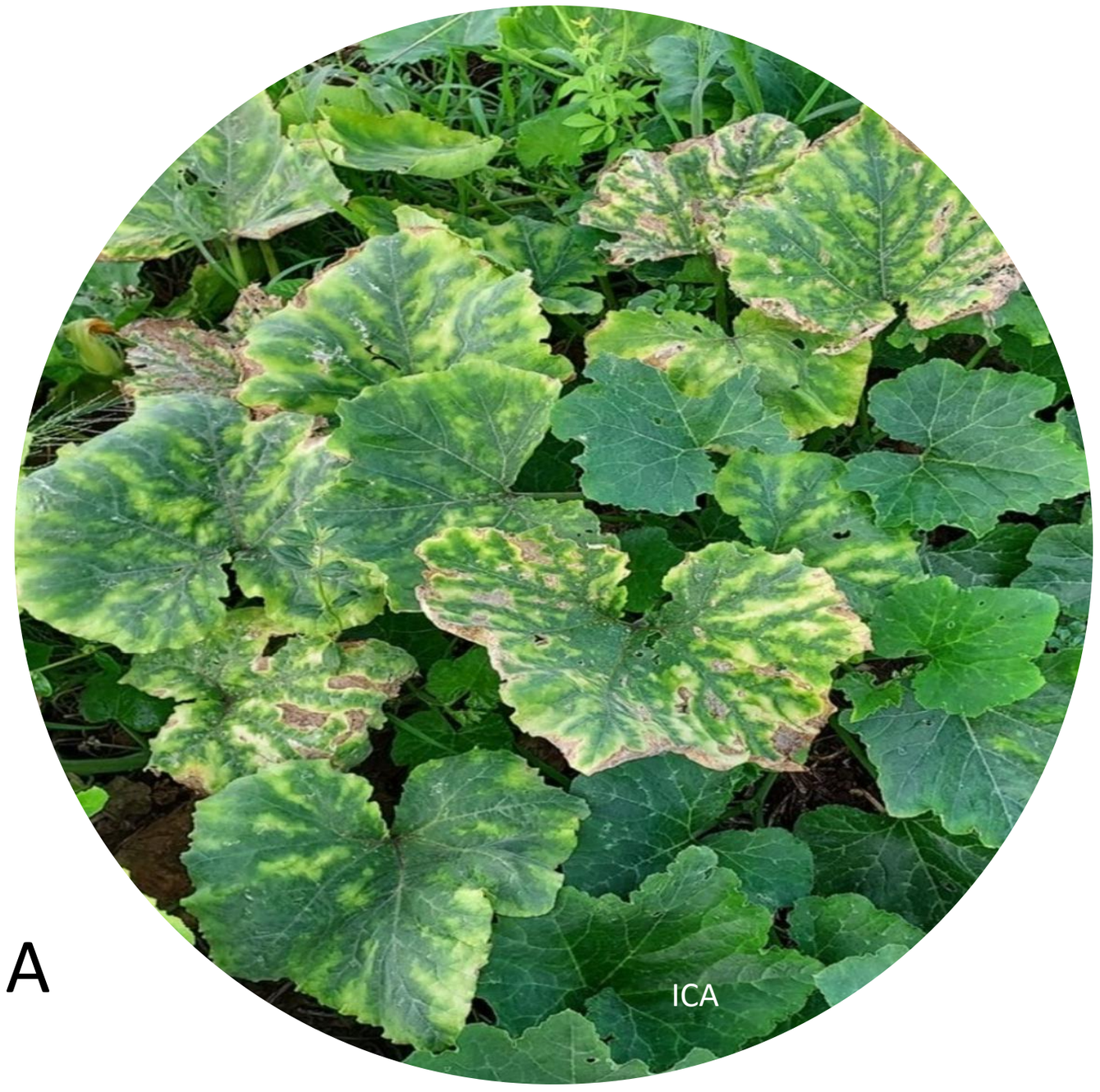
C & D

D

E

Cucurbita moschata Duchesne (Hybrid Soler)

A. “Hopper burn, ” chlorosis on the leaf with browning and drying along the leaf margin



Gossypium hirsutum L.

A. Early symptoms: reddening mainly along the leaf margins

B. Leaf wrinkling

C. “Hopper burn,” browning and drying leaves

Gossypium hirsutum L. (hybrids)

A

B

C

Helianthus annuus L.

A. Chlorosis or yellowing mainly along the leaf margins

B. "Hopper burn," browning and drying of the leaves

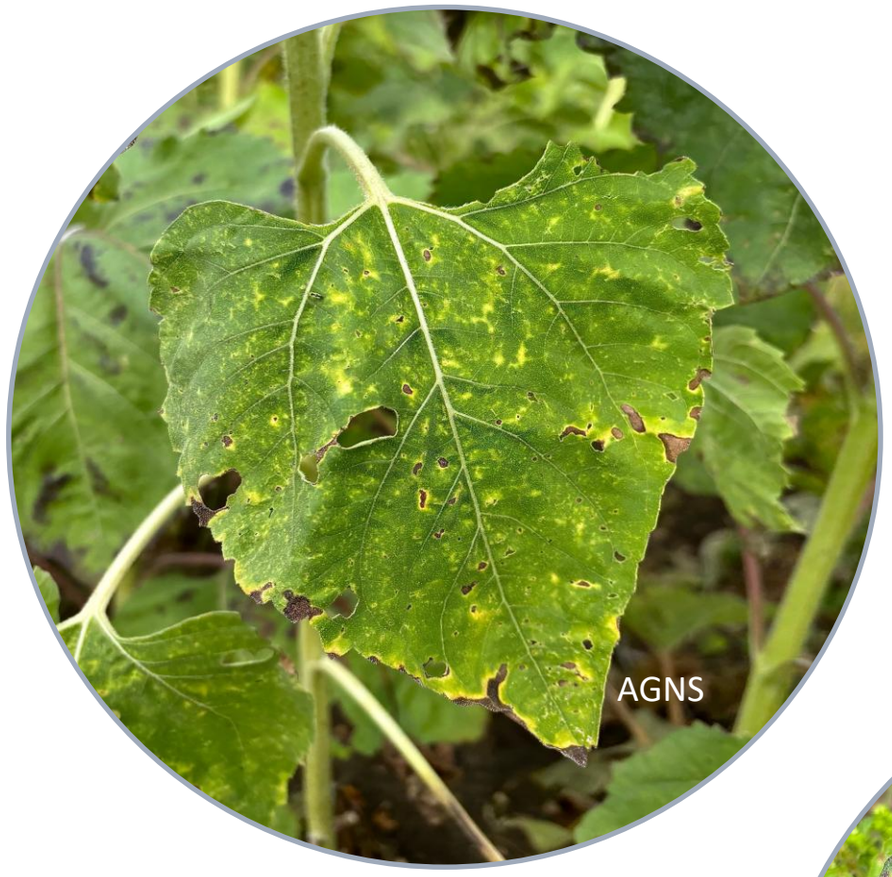
C. Leaf wrinkling

Helianthus annuus L.

A

B

Helianthus annuus L.



B

B

C

Hibiscus rosa-sinensis L.

A. Chlorosis or yellowing mainly along the leaf margins

A

A

Solanum melongena L.

A. Early symtoms: chlorosis or yellowing mainly along the leaf margins

B. “Hopper burn,” browning and drying of the leaves

C. Leaves curling upward

D. Leaf wrinkling

E. Amrasca biguttula population instead of the leaf

Solanum melongena L.

A

A

Solanum melongena L.

B

B

Solanum melongena L.

C

D

E

Weeds

Amaranthus dubius Mart (spleen amaranth)

Malachra capitata L (yellow leafbract)

Malvastrum sp. (false-mallow)

Solanum americanus Mill (american black nightshade)

Urena lobata L (caesarweed)

Amaranthus dubius Mart

A. Chlorosis or yellowing of the leaves

B. *Amrasca biguttula* nymphs

C. *Amrasca biguttula* adult

Amaranthus dubius Mart

A

B

C

Malachra capitata L.

A. Leaves reddening and browning

A

A

A

Malvastrum sp.

A. *Malvastrum* sp. plant with *Amrasca* damage

B. “Hopper burn,” browning and drying of the leaves

C. *Amrasca biguttula* adults

Malvastrum sp.

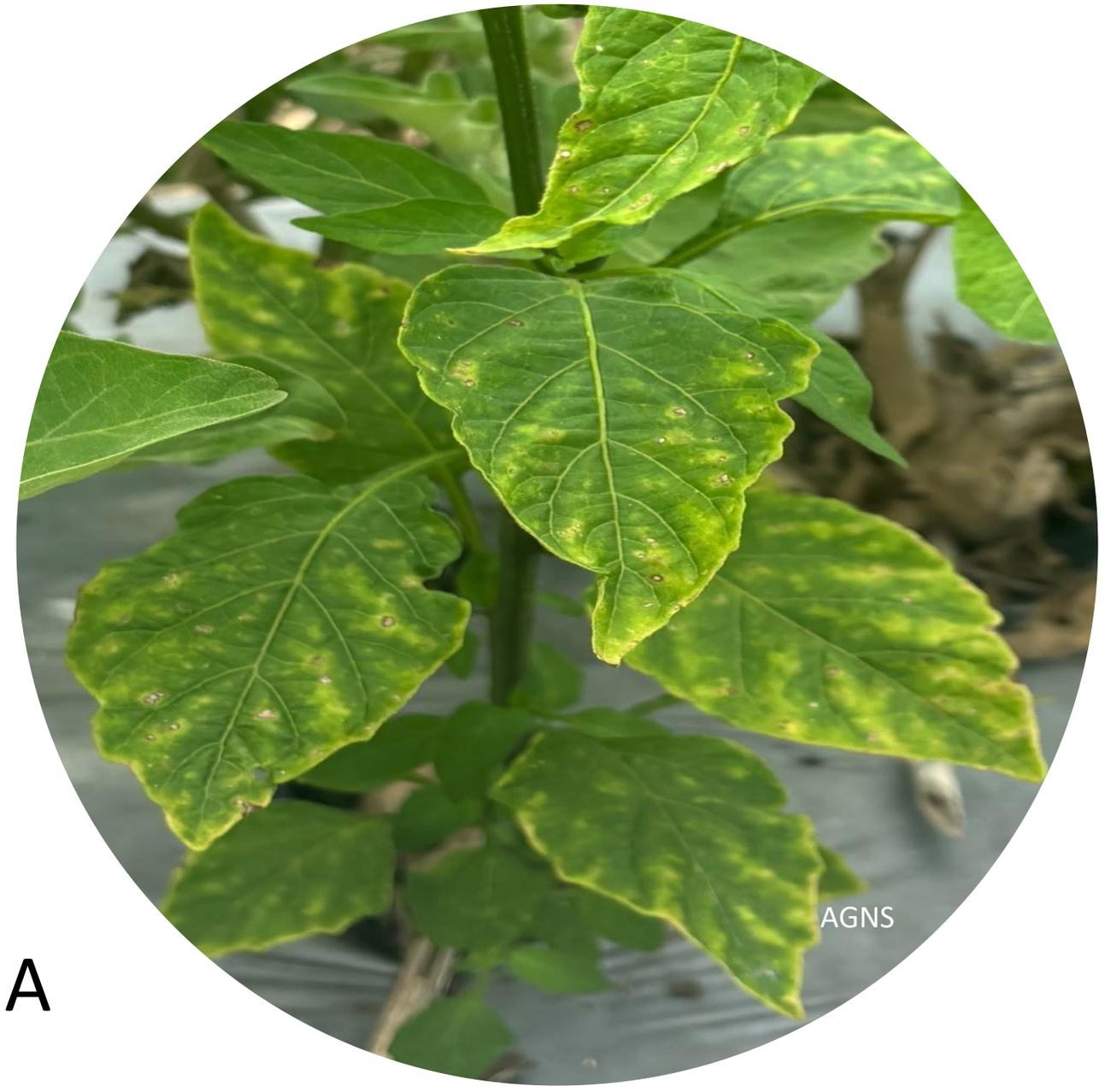
A

B

C

Solanum americanus Mill

A. Chlorosis or yellowing mainly along the leaf margins



Urena lobata L.

A. Chlorosis and reddening mainly along the leaf margins

References

Cabrera-Asencio, I., Dietrich, C. H., & Zahniser, J. N. (2023). A new invasive pest in the Western Hemisphere: *Amrasca biguttula* (Hemiptera: Cicadellidae). *Florida Entomologist*, *106*(4), 263–266. https://doi.org/10.1653/024.106.0411

Publ VI 8-30-2025