



Two-spot cotton leafhopper (*Amrasca biguttula*)



Background

Amrasca biguttula, known as the two-spot cotton leafhopper, is a major agricultural pest. It is native to Asia and parts of Oceania, and now invasive in the Americas and a threat to Europe, particularly the Mediterranean basin where climatic conditions are optimal [see [distribution](#)]. Adults are easily dispersed by wind and infested plant materials, facilitating their rapid spread.

It has a broad host range and causes significant foliar damage to important crops, such as cotton, okra, and aubergine.

Symptoms

- This pest can lead to a decline in overall plant vigour, stunted growth, and crop failure (Fig 2a, b, c).
- It causes “hopperburn” syndrome, which is characterised by yellowing and reddening leaves (Fig 2a, b). Leaves may also curl and wilt (Fig 2c, d).
- Both adults and nymphs feed on the lower surface of leaves, where they suck on the sap and extract the contents of cells (Fig 3a.).
- Multiple life stages are often found on the same leaf because generations overlap (Fig 3b.).
- Eggs are yellowish-white, curved, tiny (0.73 x 0.24 mm), and found in slits in the leaf vein.
- Adults are very small (2-3 mm), pale green to yellowish green with a prominent black spot on each forewing (Fig 4a, b), distinguishing them from the potato leafhopper (*Empoasca* spp.) and other spotted *Typhlocybinae* leaf hopper species, which are not primarily green. The black spots are easily seen using a hand lens.



Fig 1. A. *biguttula* crop damage a) Cotton, b) Okra, and c) Sunflower.

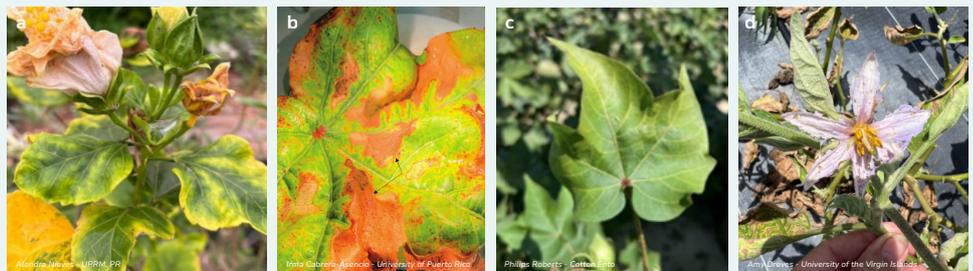


Fig 2. “Hopperburn” syndrome a) Yellowing hibiscus leaves, b) Reddening cotton leaf, c) Curling cotton leaf, and d) Wilted eggplant leaves.



Fig 3. a) Leafhoppers feeding on the underside of a leaf and b) Co-emerging leafhopper generations: nymph (purple arrow) and adult (blue arrow).



Fig 4. Adult two-spotted cotton leafhopper with a characteristic black spot on each forewing a) Dorsal view and b) Lateral view.