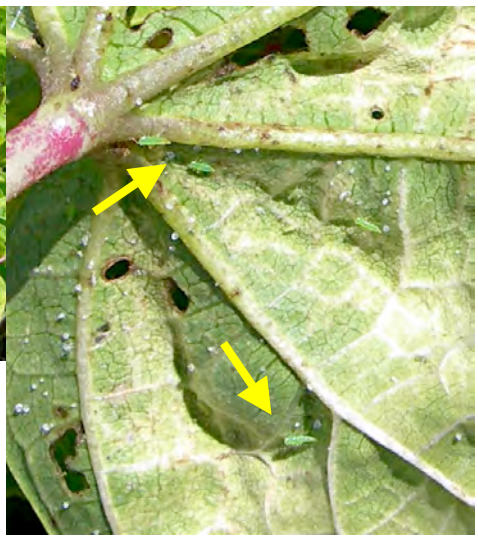
Extension Fact Sheet 39: *Sliperi kabis* Jassid



Common name: Leafhopper or jassid

Scientific name: *Amrasca.* The species reported on okra worldwide is *A biguttula biguttula* (another name is *Amrasca devastans*), and this may be the same as that attacking *sliperi kabis* in Solomon Islands. It has not yet been identified.

Hosts: In Solomon Islands, it has been found only on *sliperi kabis*, but this jassid is also known from okra, peanut, soybean and other legumes, cotton, eggplant and a number of minor hosts.

Damage

The jassids (photo, right) cause the leaves to turn yellow in patches and even turn white at the edges (photo, left). In Solomon Islands, the number of insects per leaf is small in relation to the damage, so it is possible that the jassids inject a toxin as they feed. In Papua New Guinea, large numbers occur on the leaves and cause the leaves to dry up, beginning at the leaf margins, and die prematurely, especially during times of low rainfall. The damage reduces the number of leaves available for consumption, and may also reduce their nutritional content, although this has not been tested.

Biology and Life Cycle

Eggs are laid in the leaves and the leaf stalks. The egg hatch in 8-10 days, and the yellow-green nymphs look similar to the adults except in size, and the fact that they are wingless. They moult four times before they are mature; they are then about 2 mm long. Both nymphs and adults are wedge-shaped. It is likely that the life cycle is complete within 2 weeks.

Jassid populations are influenced by rainfall. High rainfall causes many deaths of nymphs and adults.

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Detection and Inspection

Look at the leaves and see if they have light yellow to white patches. Look at the underside of the leaf and find the jassids. There may not be many present on each leaf. The leaves may be more crinkled than normal, but this is difficult to see, as leaves of some varieties of *sliperi kabis* are crinkled even when healthy. It is easier to see the jassids if dark paper is put beneath the leaves, and they are then shaken or given a sharp tap.

Management

Natural enemies:
A number of natural enemies have been reported worldwide. The larvae of lady beetles and lacewings, spiders and other predators attack both adults and nymphs. Tiny wasps are also reported that attack the eggs of jasssid. Bacteria, *Bacillus thuringiensis kurstak*i, have been recorded attacking nymphs and adults. Whether or not these or other natural enemies are present in Solomon Islands, and attack jassids in the same way, is not known.

Resistant varieties:
One variety appears to have resistance (photo, right). This is a variety from the Western Province. It may be an introduction from Papua New Guinea. The leaves are deeply dissected into long narrow leaflets, with a waxy green surface and dark leaf stalks; the plant is tall and narrow. See Kastom Gaden Association for details and planting material.

Chemical control:

Use insecticides that have fast action and low residual effect, that is, they break down quickly. The aim is to do the least harm to the natural enemies.

- In Papua New Guinea, Derris (*Derris ellipica*) is recommended. Derris contains rotenone, an insecticide. Derris is planted within or around *sliperi kabis* plots, ready for use when required. The roots are used to make a spray. Solomon Islands has a variety from PNG that also has a high rotenone concentration. See MAL and KGA for a supply of plants and ways to make the spray.
- Alternatively, use synthetic pyrethroid, such as lambda cyhalothrin or permethrin, which are available in Honiara.
- For experimental use, try those products that contain disease-causing organisms, such as spinosad (Success) and Bt – *Bacillus thuringiensis kurstaki*. Spinosad and Bt are sometimes sold in Honiara. Note, under Natural enemies above, Bt has been found to kill nymphs and adults.
- READ THE INSTRUCTIONS BEFORE USING ANY OF THESE PESTICIDES.

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