# Extension Fact Sheet 53: Red Sweet Potato Beetle

**Common name:** Red sweet potato beetle, or Sweet potato red leaf beetle

**Scientific name:** *Monolepta semiviolacea.*

**Hosts:** Sweet potato and *kangkong* (*Ipomoea aquatica*), and related *Ipomoea* species (plants in the morning glory family). The beetle occurs commonly on other crops, but does not appear to feed on them.

## Damage

Adult beetles (photo, right) feed on leaves, chewing holes, especially in the middle of the leaf (photo, left). The damage to young plants can delay establishment, early growth and crop maturity. Damage also occurs to flowers.

The larvae probably damage roots and stems, but evidence of this has not been looked for in Solomon Islands. Such damage allows entry of other organisms, fungi and nematodes especially.

## Biology and Life Cycle

The biology and life cycle has not been studied for *M semiviolacea*. The following information is from a similar pest species in Australia.

Eggs are laid under the soil surface. The white cylindrical grubs or larvae feed on roots and pupate in the soil. The life cycle takes about 2 months. There may be three to four generations a year. If larval populations in the soil are high, the emerging beetles will form a swarm and may migrate into nearby crops.

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## Detection and Inspection

Look for red oval beetles, about 6 mm long, on the leaves and flying between them. They have a small black triangular spot at the base of the wing cases, and are black underneath. They are often seen in groups on young and old leaves. Look for numerous small holes in the leaves between the veins. Adults are strong fliers, and quickly take to the wing when disturbed.

A similarly coloured leaf beetle, *Aulacophora*, is entirely red. It also has a groove across the base of the thorax - the part behind the head. By contrast, *Monolepta* has a smooth thorax. Also, *Aulcophora* is larger than *Monolepta*.

## Management

There is little known about the natural control of the Red sweet potato beetle. There are no known predators or parasites effective against high populations. The beetles contain chemicals that visual predators (birds and lizards) do not like, and they avoid them. The bright colours of this beetle warn predators that they are distasteful.

**Resistant varieties:**

- None known, but fast-growing varieties are more likely to outgrow the damage caused by the beetles. Look for differences in damage between varieties.

**Cultural control:**

- Avoid planting new crops next to those already infested with the beetles;
- Harvest the affected crop, collect and destroy the vines, and then plant a new crop;
- Provide conditions for healthy rapid plant growth, especially for cuttings; these may include manures, mulches, commercial fertilizers, as well as adequate water;
- In the early morning or evening, it is possible to catch the beetles in flight; this is a useful control method in small gardens. Perhaps a game for children!

**Chemical control:**

Ashes may be effective against Red sweet potato beetle. Apply them to the crop as soon as the pest is seen; do not wait until the population is high. [See Fact Sheet no. 56 on PDPs, Plant Derived Pesticides, for details of how to make and apply the ash.]

- Use synthetic pyrethroid insecticides, such as lambda cyhalothrin or permethrin. The choice of chemical is important: use those that are least persistent in the environment, and have low toxicity against bees. READ THE INSTRUCTIONS BEFORE USING ANY PESTICIDE;
- As infestations are often patchy, consider spot spraying or perimeter spraying where numbers are highest, leaving most of the crop unsprayed;
- Derris (rotenone) may be effective against the beetle. A local variety of Derris, originally from Papua New Guinea, with a high concentration of rotenone, is being multiplied by MAL and the Kastom Gaden Association. [See these organisations for cuttings.]

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