**Potato ladybird beetle (255)**

**Common Name**
Potato ladybird beetle, 28-spotted ladybird beetle, eggplant ladybird beetle.

**Scientific Name**
*Epilachna vigintioctopunctata*; previously, *Henosepilachna vigintioctopunctata*.

**Distribution**
Widespread. Asia, South America (Brazil), Oceania. It is recorded from Fiji, Samoa, Solomon Islands, and Tonga.

**Hosts**
Potato, and many other members of the Solanaceae family, weeds as well as crops.

**Symptoms & Life Cycle**
The adults are like typical ladybird beetles with wing cases of dull orange and black spots; however, close inspection shows that the upper surface is covered in short downy hairs. This distinguishes plant-feeding ladybird beetles from their beneficial bug-feeding relatives.

The oval yellow eggs (1 mm by 0.4 mm) are laid upright in batches of 10-20 on the underside of a leaf. They hatch in about 4 days. The pale yellow-whitish larvae (Photo 1) have long, dark-tipped branched spines on their backs; they
grow to 6 mm through three moults in the next 18 days, before attaching themselves to the undersides of the leaves and developing into pupae. This stage lasts another 4 days. The adults fall to the ground when disturbed, pretending to be dead. They also produce a yellow fluid that wards off predators.

**Impact**

A serious pest of potato that destroys the leaves and kills the plants. Infestations in Fiji appear to be particularly damaging, and can result in total crop failure (Photo 2). An unidentified leafminer also occurs on the damaged leaves (Photos 3&4).

**Detection & Inspection**

Look for the distinctive grazing on one side of the leaf, often leaving the surface of the other side intact. Look for the larvae, mostly on the underside, and the adults on the top of leaves, but always check that the beetles are leaf eating, i.e., they are feeding on the leaf, and are not beneficial species feeding, for instance, on aphids (green flies).

**Management**

**NATURAL ENEMIES**

There have been no studies of the natural enemies of *Epilachna* species in Pacific island countries. Elsewhere, species of a parasitic wasp (*Pediobius*) have been introduced, achieving successful control of *Epilachna*. There are different species of the beetles, so identification needs to be done carefully. Also, care should be taken to ensure that any *Pediobius* introduced are specific to the pest species, and not likely to attack beneficial members of the family.

**RESISTANT VARIETIES**

None known.

**CULTURAL CONTROL**

Before planting:

- Do not plant potato next to crops that are known to be alternative hosts of the ladybird beetle, other members of the Solanaceae, including weeds, and also beans.

During growth:

- Handpick the larvae, and perhaps the adults. If attempted, it should be done when the beetles are first seen in the crop.
- Remove weeds in the Solanaceae family from around the crop. However, it has been suggested these might act as trap crops, so some experimentation is needed.

After harvest:

- Collect crop debris after harvest and burn it.

**CHEMICAL CONTROL**

If chemical control is needed, do the following:

- Ash may be effective against potato ladybird beetles. Apply to the crop as soon as the pests are seen; do not wait until the population is high. (See Fact Sheet no. 56).
- Alternatively, add ½ cup of wood ash and ½ cup of lime in 4 L water; leave to stand for some hours; strain; test on a few infested plants first to make adjustment to the strength before large-scale spraying.
- Use plant-derived products, such as derris, pyrethrum or chilli (with the addition of soap).
- Note, a variety of *Derris*, brought many years ago to Solomon Islands from Papua New Guinea, is effective as a spray. It contains rotenone, an insecticide, so it should be used with caution. Check if there are *Derris* species (fish poisons) in your locality that can be used.
Alternatively, synthetic pyrethroids are likely to be effective, but will also kill natural enemies.

This fact sheet is a part of the app *Pacific Pests and Pathogens*

The mobile application is available from the Google Play Store and Apple iTunes.