

Armyworms and loopers

Night-feeding armyworms

Sugarcane armyworm: *Leucania loreyi*, *Leucania stenographa*, *Leucania abdominalis*

Common armyworm: *Mythimna convecta*

Northern armyworm: *Mythimna separata*

Day-feeding armyworms

Day-feeding armyworm: *Spodoptera exempta*

Loopers

Sugarcane looper: *Mocis frugalis*

Distribution

All species occur in all sugar-producing regions of Australia. In mixed groups on sugarcane, northern armyworm is found in higher numbers than common armyworm.

Damage

Armyworm caterpillars eat the leaves of cane. Bare leaf midribs are all that remain after heavy attack (Photo 1).



Photo 1: Armyworm damage.

A single stripping of leaves in spring or early summer rarely causes any crop loss. A wave of attacks in December-February can cause crop loss. Severe attacks weaken shoots under stress, and allow weeds to flourish.

In summer, day-feeding armyworms and the sugarcane looper infest well-grown cane. In autumn and spring, night-feeding armyworms can infest young plant cane and ratoon shoots (Photo 2).

Armyworm infestations occur only now and then. Trash-blanketed ratoon fields are often attacked. Where trash blanketing has only recently been tried, damage seems to be worse than in fields where the practice has been ongoing. This may be because predators and diseases of armyworms have built up with longer-term trashblanketing.

Infestations of sugarcane looper are rare.



Photo 2: The upper larva is a night feeding and the one below is day feeding.

Description

Night-feeding armyworms

Night-feeding armyworms hide in rolled spindle leaves or under leaf litter during the day, and feed mostly at night. Caterpillars of sugarcane, common and northern armyworm occur in similar areas and are hard to tell apart. They curl up when disturbed.

They range from pale olive-green to red/brown with stripes of white, red-brown and black running down the body. Fully grown caterpillars are up to 40 mm long. Pupae form under trash or 1 cm underground in small chambers.

Moths have uniform pale yellow coloured forewings with obvious veins. There is a line of small dark specks on the outer part of the wing and a single white speck near the centre. Hindwings of sugarcane armyworm are mostly white, whereas common and northern species have a large dark area on the outer half of the hindwing.

Day-feeding armyworms

Young caterpillars are bright green with tan heads. When about 20 mm long, they have dark green, almost black stripes down the body. On the front of the head is an upside down Y-shaped white line. Fully grown caterpillars are 25-35 mm long. Caterpillars move about during daylight and feed on leaves. Pupae are found in small chambers just under the soil surface. The moth is small, about 14 mm long, and has dark-coloured forewings with small white lines in the central area. The hindwings are pale with a light pink tint and a dark edge.

Sugarcane loopers

Caterpillars are long, thin, green or yellow-brown with two black bands across the front part of their body. They have three pairs of stubby legs at the rear end. Loopers move in a different way to other caterpillars. They grab on with their front legs, let go with their hind legs and slide their rear section forward. Caterpillars make a tube like cocoon by rolling the opposite edges of a leaf tip together. The moth is pale yellow with a dark stripe running at an angle down the forewing.

Trash-feeding caterpillars

Caterpillars of *Nodaria cinearalis* do not attack cane but eat trash. These small charcoal-grey caterpillars are found in large numbers under trash blanket in northern districts. They are often in company with night-feeding armyworms. The caterpillar is about 20 mm long, and does not have a striped pattern. Pupae are only 12 mm long.

Biology

Night-feeding armyworms

Rotting plant matter attracts moths to lay eggs. Previously flooded fields with silt-covered leaf litter and newly harvested ratoons with a fermentation smell are often targets. The life cycle takes about 8 weeks. In a field, there is usually only one major infestation per season. Sometimes a second wave of attack can follow the first, but this is rare.

Day-feeding armyworms

These feed day and night and move as a band from one food source to another. Between December and February, large

numbers develop in grass, weedy canefields, lawns, headlands and creek banks, before moving into cane. The life cycle takes 4 weeks in mid-summer.

Sugarcane loopers

These start in grass-infested cane or in grass-infested legume cover crops, and move into cane.

Management

Several species of tachinid flies and parasitic wasps attack larval and pupal stages of armyworms. Parasitoids are normally active in cane fields, but need at least one armyworm generation to build up to a useful level. Several viral and bacterial diseases also infect armyworms. Diseased armyworms turn black and hang from cane leaves. The second-wave of larvae is usually parasitised and infected by disease.

Spraying armyworms is not usually done. Each field will normally receive only one major infestation in a year. One attack on a healthy crop early in spring will not cause significant yield reduction. Most of the damage has already been done before a spraying is done anyway. Early spraying of the first wave of armyworms also kills parasitoid and reduces the natural build-up of diseases. A series of attacks in early- to mid-summer, particularly in damaged, weedy or weak crops may cause enough leaf loss to warrant spraying. Always identify caterpillars found under the trash before deciding to spray.

Chemicals (active constituents) registered for control of armyworms are:

- Chlorpyrifos 500 g/L (numerous products).
- Trichlorfon 500 g/L (Nufarm Lepidex 500 insecticide, Diptorex 500SL insecticide).
- Permethrin (numerous products).



Photo 3: *Leucania loreyi* adult moth.