

# Identifying Fall armyworm

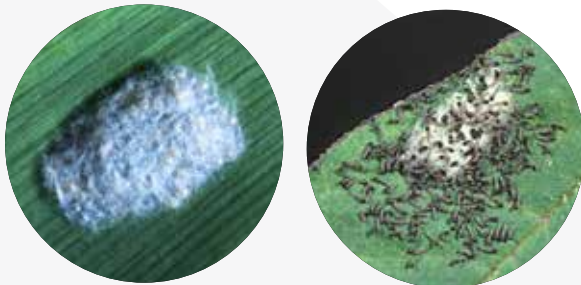
*(Spodoptera frugiperda)*

Fall armyworm has four life stages: eggs, larvae (caterpillars), pupa and adult (moth). However identifying fall armyworm from the eggs, pupa and moths is very difficult.

## What to look for

### Egg mass

Pale yellow and laid as an egg mass of about 100 to 200 eggs. Egg masses are laid on leaves and covered with a layer of silk-like furry substance.



### Larvae – Early instar larvae (caterpillars), stages 1–3

Larval appearance changes with development throughout the life cycle. When larvae first hatch from eggs, they are light coloured with a relatively larger dark head compared to the rest of the body. Molecular testing or rearing up of the caterpillars may be required to confirm identification at this stage.

#### FAW: young larvae – length 6-9 mm

Top view



Young fall armyworm larvae (6-9 mm), © Visser ARC-VOP Biocontrolist



Fall armyworm larvae have key identification features, including four large spots in a square arrangement on the second last segment.

### Larvae – Mid to late instar larvae (caterpillars), stages 4–6

Features to look for in older larvae include:

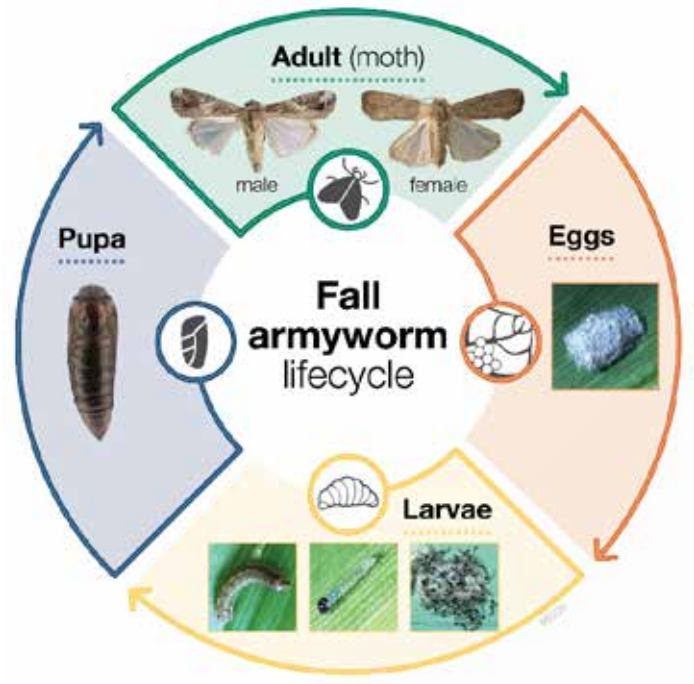
- » Inverted white 'Y' mark on the head between the eyes.
- » More prominent thin white lines develop down the length of the body.
- » Light-coloured bands on the sides with a dark-coloured band between them.
- » Four large black dots in a square formation on posterior upper body segment eight (i.e. the second last abdominal segment near the end of the caterpillar).
- » Four smaller dots in a trapeze arrangement on dorsal surface of all other segments, including the segment at the end of the caterpillar.
- » Sclerotised (hardened) rings around hairs at front and back of caterpillar.
- » Body colour can vary from pinkish to dark brown.
- » Late instar larvae are about 35mm long.

**FAW: mature larvae – length 30-36 mm**

Top view



Mature fall armyworms (28-36 mm). © Vaseer ARC-WGP Biosecuritylab



**Pupae**

Pupae are 13–17 mm long and shiny brown. Pupation occurs in soil, reproductive plant parts, or if larvae cannot burrow into the soil, cocoons are formed in plant debris.

**Adult moths**

Adults are 16–18 mm long, and a wingspan of 38 mm, with brown-grey forewings and cream-coloured hind wings.

Fall armyworm appears similar to the closely related species *Spodoptera litura* (tropical armyworm) which is present in New Zealand. Adult moths are nocturnal and most active during late summer and early autumn.

