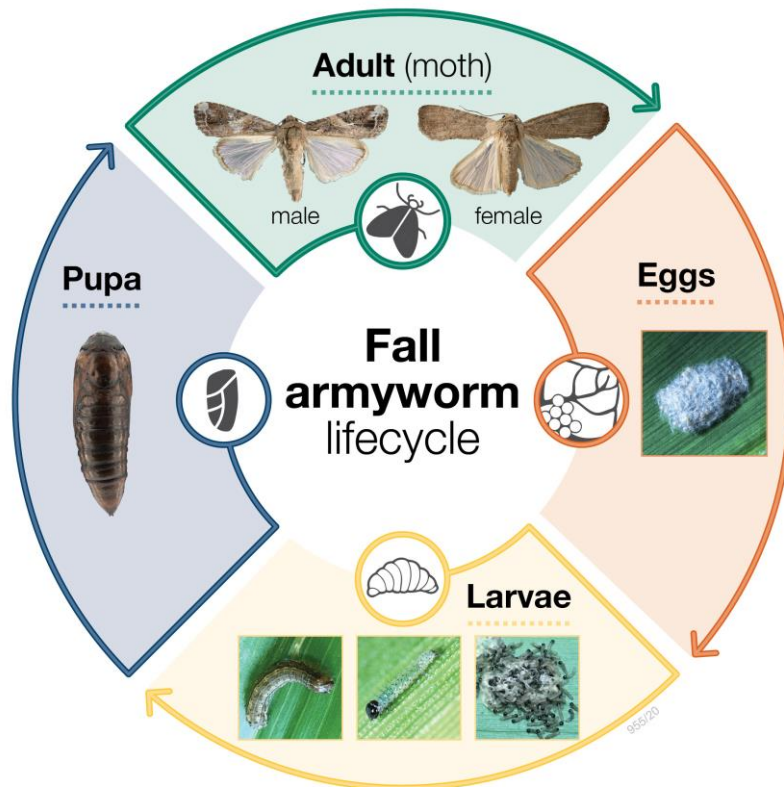


Fall armyworm larval identification guide

Fall armyworm (*Spodoptera frugiperda*) has four life stages: eggs, larva (caterpillars), pupa and adult (moth), however identifying fall armyworm from the eggs, pupa and moths is very difficult.



The following key features of fall armyworm larva are used in the detection of the insect in the field.

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.



Newly hatched fall armyworm larvae



Early instar fall armyworm larva

Features to look for:

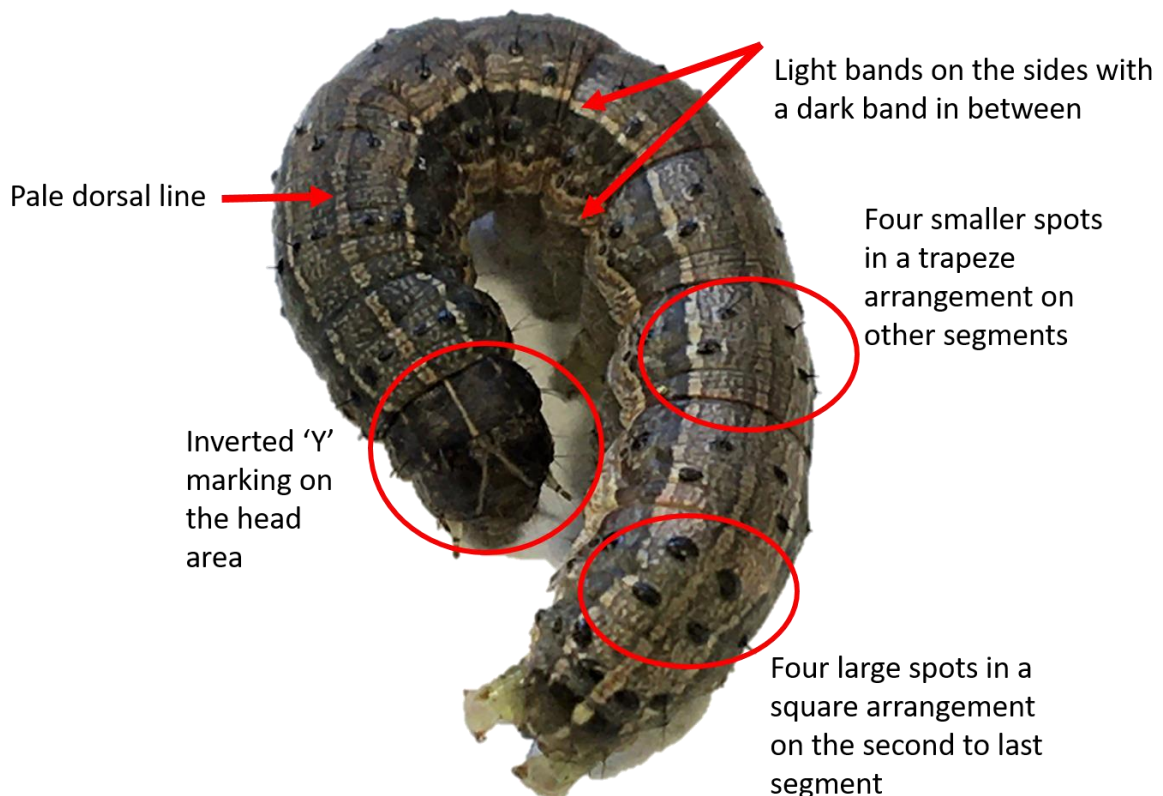
- Newly hatched larvae are light coloured with a dark head.
- The body becomes darker after the first instar, ranging from light green to dark brown.
- Thin white lines develop down the length of the body.
- Dark spots with small setae (bristles) appear.
- Larval length during early instar (stages 1-3) is up to 6.5mm.

Mid to late instar larvae (caterpillars), stages 4-6

Older larvae possess the more distinctive features highlighted in the image below.

Features to look for 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 (ie. 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.



Pest larvae that could be confused with fall armyworm

Many existing caterpillars in Western Australian crops appear similar to fall armyworm. Some of these are listed below for comparison.



Cluster caterpillar or tobacco cutworm (*Spodoptera litura*)

Host crops in which cluster caterpillar or tobacco cutworm is commonly found include cotton, maize, sorghum, pastures and hay



Photo courtesy Alison Milton

Native budworm (*Helicoverpa punctigera*)

Host crops in which native budworm is commonly found include maize, cotton, canola, pulses, sunflower, flax, pasture legumes, and fruits and vegetables



Corn earworm or cotton bollworm (*Helicoverpa armigera*)

Host crops in which corn earworm or cotton bollworm is commonly found include maize, tomato, cotton, pigeon pea, chickpea, rice, sorghum, and cowpea, groundnut, okra, peas, field beans, soybeans, lucerne, *Phaseolus* spp., other *Leguminosae*, tobacco, potatoes and flax



Photo courtesy
Christine Norwood

Common armyworm (*Mythimna convecta*)

Host crops in which common armyworm is often found include *Poaceae* spp. (including cereals and grasses), in addition to pineapple, sweet potato and lucerne

More information on the identification of fall armyworm

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