

Potential impact of fall armyworm on sugarcane

Fall armyworm (*Spodoptera frugiperda*) is an exotic pest that has been detected in Queensland.

Based on overseas experience, fall armyworm larvae can cause significant crop damage if left unchecked.

Adults can fly long distances and migrate quickly, particularly with the aid of weather patterns and jet streams. Check crops regularly to detect the early stages of infestation.

Pest risk

Broadacre crops at particular risk are the grass species of maize, sorghum, rice and sugarcane.

Overseas, sugarcane is not typically impacted by fall armyworm, although it is reported to feed on it. It is possible that under high fall armyworm pressure, sugarcane can be defoliated to some extent, but at this point it is unknown to what extent this may happen in Australia.

There are a number of other species of armyworm and loopers that defoliate sugarcane in Australia, but they rarely require chemical control. It is likely that the management recommendations for these species will be applicable to the fall armyworm. The potential for crop loss is greatest when defoliation occurs repeatedly through early-mid summer.

Overseas, fall armyworm has rapidly developed pesticide resistance where subjected to repeated and prolonged use of insecticides.

Appearance

Eggs



Image 1 – Egg mass

Eggs are pale yellow and 0.4 mm in diameter and 0.3 mm high. They are laid in furry 'egg masses', which stick to foliage. There are 100–200 eggs in a mass.

Larvae



Image 2 – Larvae emerging from egg mass



Image 3 – Older larvae with 'Y' shape on head

The larvae are light green to brown with a larger darker head. As they develop, they become darker with white lengthwise stripes and dark spots with spines. Older larvae (30–36 mm) have a distinctive pattern of four spots on the second to last body segment and an inverted ‘Y’ shape pattern on their heads.

Pupa

The pupa is red-brown, 14–18 mm long and approximately 4.5 mm wide. Pupation mostly occurs in soil under the host plant, occasionally in host vegetation. Fall armyworm do not hibernate during winter because they cannot survive temperatures below 10°C.

Adult



Image 4 – Female moth



Image 5 – Male moth

The adult moths have a brown or grey forewing and a white hindwing, and a wingspan of 32–40 mm. Male fall armyworms have more patterns and a distinct white spot on each forewing. Cotton Info’s [Insect ID Guide](#) provides a detailed guide to identifying fall armyworm.

What should I look for?

Egg masses and small larvae will be difficult to find in sugarcane. With other armyworm species, larval activity is often overlooked until defoliation is severe and leaves are stripped. Larvae may be more visible at night when they are actively feeding.

What other pest could be confused with fall armyworm?

There are a number of other armyworm and looper species that occur in sugarcane. A guide to these species is provided in Sugar Research Australia’s [armyworm and loopers information sheet](#).

How can I manage an outbreak?

Infestations of armyworm typically do not warrant spraying in sugarcane.

If an infestation is not detected until severe defoliation is evident, it is unlikely that spraying will be of benefit as the damage has already been done. If a crop has been defoliated previously, regular monitoring for larvae and leaf damage through summer is advised to prevent further loss.

Armyworm may move into cane from weeds and grass in and around the cane fields.

Key to the control of any pest is an integrated pest management approach. Early or frequent spraying of armyworms will disrupt the activity of these biocontrol agents. The Department, in

collaboration with industry, is working to identify strategies and tactics for the medium to long-term response.

Some insecticides used for the control of *Helicoverpa armigera*, other armyworms and caterpillar pests may provide some level of control of fall armyworm. Biocontrol agents released for *Helicoverpa* are also expected to have an impact on fall armyworm.

It is essential with any pesticide use for fall armyworm control that the implications for chemical resistance development in other pests that may be exposed and the potential impact on natural enemies are considered.

The APVMA is currently assessing, as a priority, applications for permits for the use of chemicals against fall armyworm. To check for the latest chemical permits applying to fall armyworm using the [APVMA's permit portal](#)—search for 'fall armyworm' and check the 'pest/purpose' button.

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You should already have strong on-farm biosecurity measures to protect your crops from pest and diseases and should implement good farm hygiene for weed control to remove hosts that could build populations. More information is available at farmbiosecurity.com.au.

What should I do?

Be on the lookout and if you suspect fall armyworm, report immediately to the Queensland Department of Agriculture and Fisheries on **13 25 23**.

More information

For more information, contact the Queensland Department of Agriculture and Fisheries on **13 25 23** or visit business.qld.gov.au/fallarmyworm.

*Images 1–2, 4–5 by James Castner, University of Florida
Image 3 by D. Balaraju, Krishi Vigyan Kendra*