

Exotic Pest Fact Sheet 15

Fall Armyworm (*Spodoperta frugiperda*)

What is it?

Fall armyworm has a broad host range feeding on over 350 plant species, preferring corn and other Poaceae (grasses and cereals). Tomatoes and other Solanaceae (capsicum, eggplant) are also hosts.

What does it look like?

Adults are 16-18 mm long, with a wingspan of 38 mm, brown-grey forewings and cream-coloured hind wings (Fig 1). 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

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.

Larvae change from green-brown to brown-black as they mature, to be almost black in the 'armyworm' phase, and is accompanied with marking changes (Fig 2). Eggs are small (0.4 mm) and laid on leaf surfaces in masses of 150-200, covered with a protective layer of scales from the female abdomen (Fig 2).

Larvae feeding on stems and leaves causes crop damage. The larvae can skeletonise the leaves. Severe infestation can cause defoliation, particularly when larvae are in the 'armyworm' stage. On tomato plants, buds and growing points may be eaten and the fruit can be pierced. Plant health is also affected.

Why is it important?

Fall armyworm causes damage to a wide range of economically important crops. In large numbers, larvae can cause rapid defoliation resulting in significant yield losses.

How does it spread?

Adults and larvae are highly mobile. Adults are strong fliers, disperse during summer, and can migrate up to 500km before laying their eggs. Larvae can become windborne and land on other plants. When the mature larvae reach the 'armyworm' stage they can migrate to adjacent crops.

Movement over long distances can occur by trade in infested crop and plant material, and contaminated commodities.

Where is it present?

Fall armyworm is native to tropical and subtropical regions of the Americas. Since 2016, it has rapidly spread to Africa, Asia, Cyprus, Israel, Jordan, Syria, Australia, and Oceania (Papua New Guinea, New Caledonia, Norfolk Island, Solomon Islands).

In March/April 2022, fall armyworm was detected in several different locations across the northern North Island, indicating that its arrival was by wind dispersal from Australia. Fall armyworm is now under long-term management.

How can I protect my industry?

Check your production site frequently for the presence of new diseases and unusual symptoms. Make sure you are familiar with common pests and diseases of your industry so you can recognise something different.



Fig 1: Fall armyworm male adult. Image: Robert J. Bauernfeind, Kansas State, Bugwood.org.



Fig 2: Fall armyworm larva (left), larvae hatching (middle) and egg mass (right). Images: Plant & Food Research.



Fig 3: Fall armyworm on tomato leaf. Image: Alton N. Sparks Jr, University of Georgia, Bugwood.org.