

Fall armyworm (*Spodoptera frugiperda*)

The fall armyworm moth is a plant pest that can feed on over 350 plant species, preferring grasses and cereals. Vegetable hosts include corn, asparagus, beans, peas, beetroot, brassica, capsicum, cucurbits, eggplant, onions, kumara, lettuce, and tomatoes. Early detection and reporting of fall armyworm will help protect New Zealand's primary sector.

Current situation

The moth, which is an unwanted pest in New Zealand, is actively spreading around the world. It is native to the Americas and since 2016, has been introduced to Africa, Asia, and is established in parts of Australia.

This moth has been on our radar for some time, and we have worked closely with our primary sector partners on keeping it out.

Fall armyworm is a hitchhiker pest and work done by Biosecurity New Zealand shows adults can spread via wind dispersal events from Australia.

Biosecurity New Zealand's risk analysis has found that the moth would struggle to establish in New Zealand, as areas with preferred hosts do not necessarily have the correct climate to suit fall armyworm, as it is a tropical species, thriving in warm conditions.

This species is unable to hibernate over winter, so populations are likely to die out during our winter period. This will cover all life forms (eggs, larvae, pupae, adults).

The overall risk was assessed as low because consequences nationally are considered to be very low, with the potential for low localised impacts.

What do they look like?

Adults are 16–18 mm long, and a wingspan of 38 mm, with brown-grey forewings and cream-coloured hind wings. Male adults have more distinct patterns on their forewings. Fall armyworm appears similar to the closely related species *Spodoptera litura* (tropical armyworm) which is present in New Zealand.



Figure 1: Fall armyworm adult moth

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.

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.

What should I look for?

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 corn, larvae attack the ear, silks, cob and kernels which reduces leaf mass, fruit, pods and seeds, and plant health. Adult moths are nocturnal and most active during late summer and early autumn.



Figure 2: Fall armyworm larvae on beans



Figure 3: Fall armyworm egg mass on maize

If you believe you have seen a fall armyworm – either an adult, larvae or egg masses – take a photo and call our Exotic Pest and Disease Hotline on 0800 80 99 66 or report online report.mpi.govt.nz/pest

How do they spread?

Fall armyworm adults and larvae are highly mobile. Adults have a strong ability to fly and disperse during summer. Adults can migrate up to 500 km before laying their eggs and are also known to travel long distances on stormfronts.

Newly hatched larvae can lower itself on a strand of silk and become windborne, contaminating plants nearby. Mature larvae can migrate when they reach the armyworm stage and migrate to adjacent crops. When in large numbers they consume nearly all vegetation in their path.

How can I protect my industry?

Check your production sites frequently for signs of new pests and unusual symptoms that might indicate new diseases.

Its important people report any suspected findings to Biosecurity New Zealand.

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