FALL ARMYWORM UPDATE
16 February, 2024

Key points
The 2023/24 growing season has 93 confirmed reports. These have come from Northland, Westland, Tasman, Bay of Plenty, Auckland and Waikato, along with one find in the Marlborough region.

- Suspect moths from Manawatū-Whanganui will be identified via DNA testing.
- Moth flights observed in Northland over the last two weeks have coincided with small numbers of moth captures in pheromone traps further south, in Auckland, Waikato and BOP. These could be fly-ins from the Northland population.
- In the South Island, FAW has been found on the West Coast, Tasman and now Marlborough.
- Expect moths to arrive in multiple regions as populations increase and progress through generations. Later generations will have greater numbers of larvae and the potential to cause significant damage. **Please scout crops**, especially later planted ones, which are most at risk going forward.
- Sweetcorn and maize grain growers need to remain vigilant at all crop stages as there have been reports of cob damage due to FAW damage.
- The earlier FAW is identified the likelier effective management will be achieved.
- Parasitism of FAW, by the parasitic wasp Cotesia sp, is being observed across the country. Small FAW infestations appear to be kept in check by the wasp.
- The parasitic wasp Meteorus pulchricornis has been observed in a first host association with fall armyworm in New Zealand.
- Corn earworm is being observed more frequently across the country. Corn earworm eggs are laid in the silks and larvae make their homes at the top of the forming cob.
- Your observations are important. Please record them and inform us; without them, it is hard to validate and develop the modelling work we are doing.

The insecticide Sparta® is on label for aerial and ground applications for controlling fall armyworm on maize and sweetcorn crops. Consult your advisor and avoid using insecticides that are ineffective on fall armyworm and potentially harmful to beneficial insects such as parasitic wasp *Cotesia sp*.

2023/24 known distribution

The current distribution of fall armyworm in New Zealand. Data includes the timestamp, location, lifecycle stage, population estimates, and crop type. All of this information is being used to create more in-depth mapping and will be integrated with other FAW modelling. The goal is to produce a robust decision-making tool to assist growers.

FAW damage

Although in localised areas in this particular paddock, larvae had entrenched themselves in the whorl and destroyed any further development. This is where late crops will suffer, larger populations of larvae can decimate areas. We have seen this overseas and in some areas of NZ during the response period.

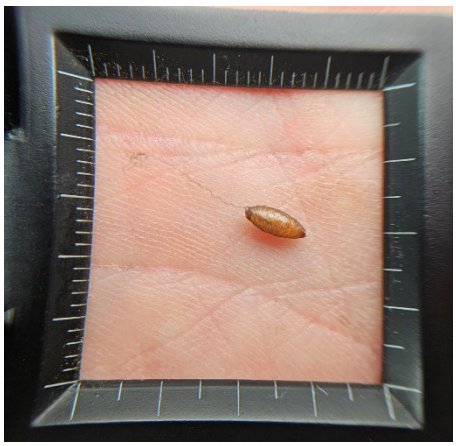
FAW damage in maize cobs

Late instar larvae feeding on the kernels. While this may not always be significant in advanced silage crops, an infestation in maize grain and sweetcorn crops has real

At this date last year there were 112 fall armyworm finds nationwide, including Northland, Auckland, Waikato and Taranaki

- Confirmed finds so far this season are in Northland, BOP, Auckland, Waikato, Westland, Tasman and Marlborough.
- Average temperatures were considerably lower in regions compared to winter and spring last year.
- Marginal areas may have seen FAW populations unable to overwinter and depend on migration from more favourable areas.

- If you are scouting your crops inform us even if you do not find FAW, **this population data is useful.** The data provided has been fantastic, it will enable the development of the modelling and has been extremely helpful for ongoing research aiming to develop predictive tools.



Above: The parasitic wasp *Meteorus pulchricornis* been observed using fall armyworm as a host for the first time. The left photo shows a single larva within the fall armyworm and the right photo shows its cocoon (which it suspends from leaves via a silk thread). Thanks to Daniel Hawkins of Northland Seed and Supplies for this observation.

Dr Graham Walker from Plant & Food identified *M. pulchricornis* after seeing the wasp's distinctive cocoon. *M. pulchricornis* arrived in New Zealand in the 1990s and Graham has found that it accounts for around 10% of the parasitism of corn earworm. This is another beneficial insect within the maize and sweetcorn environment to keep an eye out for.

What to do if you think you find fall armyworm

1. **Photograph it:** FAW can be easily mistaken for other species, so if you suspect it, take a good quality photo, and be sure to include the head, body and rear of the

larvae. This can be in multiple photos if necessary. This guide from the Queensland Department of Agriculture and Fisheries outlines how to take photos of FAW.

2. **Catch it:** Samples are welcome and are important for positive identification and testing.
3. **Contact us:** Contact the Foundation for Arable Research at FAR@far.or.nz or Biosecurity Officer Ash Mills at ashley.mills@far.org.nz

Trap network and active scouting and reporting have been fantastic throughout the season and are much appreciated.

- All data recorded (even zero finds) are valuable for the validation of modelling platforms and for understanding the pest in New Zealand.
- If you are keen to monitor a trap and share scouting information please get in touch
- Data and observations of parasitism as well as potential relationships with other pest species would also be welcomed.

Consult the FAR website for the latest resources and identification guides

FAR Research | Welcome to the Foundation for Arable Research

Listed below are useful updates, tools and guides on detection and identification

FAR Research | Fall armyworm identification and background

For advice around Sparta, FAW information and requesting a great FAW glovebox guide - Fall Armyworm (corteva.co.nz) and this FAW Sparta technote Salesforce

Thresholds for economic damage

Plant Health Australia provides useful guidance for this:

CROP	THRESHOLD
Maize **vegetative**	>3 larvae per plant and/or 50% of plants show signs of fresh feeding
Maize **whorl stage**	>20% of plants at whorl stage with one or more larvae and/or more than 75% of plants showing signs of feeding damage
Sweet corn **Tassel emergence**	>15% of plants infested at tassel emergence

Useful insight from over the ditch - https://www.planthealthaustralia.com.au/fall-armyworm/

SGRR Davis Scale Guide - 86d44eb4-7d19-5ce5-befe-4dd32eeca38c.pdf (far.org.nz)

A farm Biosecurity Register is a great way of reducing the risk of unwanted weeds, pests and diseases arriving on your doorstep. Do you have one? Find out more here FAR Research | Arable Biosecurity Risk Register