Fall armyworm update

Friday 22 November, 2024

Fall armyworm found in Northland

Fall armyworm finds have been confirmed in several locations across Northland. Contact your local agronomist for advice as local knowledge is key to effective management.

Photo (L). 2024/25 fall armyworm larvae found in the whorls of a maize silage crop. This crop is at the early whorl stage and the infestation is estimated to be around 1% across the paddock. The grower has experienced FAW in previous seasons and plans to continue monitoring, not taking any action unless the situation escalates.

Key points

- **Current status:** Multiple confirmed reports of fall armyworm (FAW, *Spodoptera frugiperda),* across the Far North. Contact your local agronomist for support, local knowledge is key to effective management.
- **Crop monitoring:** Scout your crops as often as possible, monitoring existing infestations and looking for FAW crop damage in regions not known to have FAW yet this season.
- **Natural controls:** *Cotesia ruficrus*, spiders, and other predators remain key allies in managing FAW populations. These are widespread throughout New Zealand.
- **Other maize pests:** Cutworm *(Agrotis ipsilon)* is causing a lot of damage across the North Island with many crops having to be replanted. Cosmopolitan armyworm *(Mythimna separata)* have been observed in small numbers, and some early corn earworm *(Helicoverpa armigera)* have also been spotted.
- **Identify your pests:** If you need help identifying pest damage or larvae then please get in touch, refer to resources on the FAR website or contact your agronomist.

Regional overview for 2024/25 season

Northland

Multiple confirmed finds of larvae so far this week, while most FAW populations recently observed were small and localized, consisting primarily of early neonate larvae, one larger infestation was identified, now at the late instar stage.

Communication with your neighbouring maize and sweetcorn growers, as well as your advisor, will help for a collaborative understanding and effort to manage this pest.

Auckland and Waikato
There are no reported FAW finds this season in this region. FAW activity last year was primarily recorded in the Auckland region and the very top of Waikato, with no significant finds in central Waikato. Scouting remains critical to ensure early detection and effective management.

Bay of Plenty
There are no reported FAW finds this season in this region. Last season, FAW populations were mainly observed in coastal areas. Remain vigilant, particularly with regard to paddocks adjacent to last season's affected areas. Early planting of maize will help reduce potential FAW impacts.

Gisborne
There are no reported FAW finds this season in this region. While Gisborne recorded only a few FAW finds last season, the proximity to other affected regions suggests a need for continued monitoring. Focus on scouting, particularly for any signs of larvae in emerging crops.

South Island (Tasman, Canterbury, Marlborough, Westland)
There are no reported FAW finds this season in this region. The earliest FAW finds in the South Island last season were in Westland, in mid-December. Tasman and Marlborough also recorded some FAW. Coastal climates, e.g. Westland, may support small overwintering populations. Vigilance is key, particularly near previously affected maize paddocks.

Crop establishment and early whorl stage

Photo (L). Regularly inspect crops for the characteristic "windowing" on leaves, a tell-tale sign of FAW feeding. Spotting and accurately identifying larvae at this stage is crucial for effective management. Early detection allows for timely decisions, whether relying on natural predators or implementing targeted interventions, to minimise crop losses while protecting beneficial insect populations.

Minimise insecticide use
Overuse of chemicals can disrupt beneficial insects such as the parasitoid *Cotesia ruficrus* and generalist predators like spiders, which help manage egg and early larval stages of FAW. Consult with advisors on how to balance pest control while protecting beneficials.

In previous seasons we have seen many cases of FAW surviving insecticide applications not recommended for FAW control. In maize and sweetcorn, Corteva's Sparta™ is on label for use against FAW. This product is also effective on other pest species.

Photo (L).

Late instar FAW showing the three key identifiers: a distinct 'Y' on the head leading into the dorsal line, four trapezoid patterned dots on the body segments and four pronounced dots in a square pattern at the rear.

Other pests may share a similar identification but not all three key markings together.

Supporting the FAW SFFF Project

The SFFF project continues to play a critical role in enhancing New Zealand's FAW surveillance and modelling capabilities. Updated phenological models and soil temperature data are helping to predict FAW population dynamics, allowing for better-informed management strategies. Below are the current economic thresholds developed by AgR specifically for New Zealand, as part of the SFFF.

Current recommendations[1]		
	Crop growth stage	**Threshold[1]**
Maize	Seedling	≥5% of plants are cut.
	Early whorl[3] (knee high)	≥20% of plants are infested.
	Late whorl (Shoulder high)	≥40% of plants are damaged, and larvae are present
	Tasselling/early silking	≥20% of plants are infested
Sweetcorn	Seedling	≥5% of plants are cut.
	Early whorl (knee high)	≥20% of plants are infested.
	Late whorl (Shoulder high)	≥40% of plants are damaged, and larvae are present
	Tasselling/early silking	≥5% of plants are infested

Key progress

Monitoring in Northland has yielded valuable data on early-season FAW activity. These findings will inform management practices for the coming months and contribute to long-term strategies for managing this pest in New Zealand.

Data analysis

November findings are being integrated into the project database. This includes assessments of FAW larval stages and associated crop damage, providing insights into population growth and dynamics.

Surveillance success

A first moth capture of the season, 10 days ago, was in a trap next to early instar larvae found close by today. Last season, the trapping network recorded 399 adult FAW moths, with a notable increase in captures from January 2024 onwards as larvae populations grew. Additionally, reports from growers and agronomists have contributed to a more comprehensive dataset, allowing better understanding of FAW distribution.

Supporting beneficial insects

Preserving natural enemies of FAW is crucial. Encouraging native vegetation around fields can offer refuge for beneficial insects. Resources and guides on enhancing farm biodiversity are available on the FAR website https://www.far.org.nz/resources/far-focus-13-biodiversity .

What to do if you find FAW

1. **Photograph:** Suspected FAW can be easily mistaken for other pests. Take clear photos of the head, body, and rear.
2. **Catch:** Samples are crucial for positive identification and DNA testing.
3. **Trap:** If you would like to monitor a trap, or have FAW in your crop please reach out.
4. **Contact us:** Reach out to the Foundation for Arable Research at FAR@far.org.nz or Biosecurity Officer Ash Mills at ashley.mills@far.org.nz.

Useful links

FAW identification, guides and relevant fact sheets: https://www.far.org.nz/resources/fall-armyworm-identification-and-background