

Native budworm caterpillar in lupins. Image: Christiaan Valentine, DPIRD

Protecting WA crops

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Impact of a dry summer on insect pests

At a glance:

- In most broadacre cropping areas a hot, dry summer has led to an absence of a green bridge and as a result lower pressure from insect pests such as aphids in the landscape.
- Summer rainfall has occurred in non-agricultural regions. DPIRD will be monitoring for native budworm flights into the WA grainbelt from June, as native budworm flights occur earlier when there has been a green-bridge in non-agricultural areas.

Below-average summer rainfall across much of the grain belt has resulted in the absence of a green bridge in most areas. While some insect pests can persist in seed, stubble, or soil, others require green plant material to survive, leading to lower pest numbers in the landscape. Pests that are vectors of viruses are not expected to be an issue early in the season due to these reduced numbers, although it is still recommended to monitor for pests, as even low numbers of vector pests can be damaging.

Native budworm (*Helicoverpa punctigera*) can develop large populations by feeding on native plants. Summer rainfall in non-agricultural areas, which provides a green

bridge for the native budworm, may have led to an increase in their population. The Department of Primary Industries and Regional Development (DPIRD) monitors native budworm flights from June onwards. Native budworm populations often migrate into the WA grainbelt in late winter and spring, causing crop damage, but these migrations tend to occur earlier when plant hosts are outside the grainbelt.

Monitoring regularly for insect pests over the growing season is recommended, particularly with climate models predicting warmer-than-average winter temperatures. Warmer temperatures can lead to faster life cycles in insect pests, resulting in rapid population increases over a short period.

Crops experiencing moisture stress may display symptoms similar to those of viruses and nutritional deficiencies, so its important to monitor them closely to ensure a correct diagnosis is made.

In the past, warmer temperatures have resulted in uncommon pests being found. To identify an unusual pest, photos can be submitted via email to the PestFacts WA team at pestfactswa@dpird.wa.gov.au. The PestFacts WA Reporter app will be back online soon.

While some insect populations may increase with the warmer temperatures, other insects such as the redlegged earth mite (RLEM) may decrease in numbers. RLEM require rainfall and mean soil temperatures of below 19°C to hatch.

For more information on WA's early season climate and pest outlook, watch the recent PestFacts WA webinar recording on the DPIRD <u>YouTube channel</u> or download the PowerPoint slides from the DPIRD About PestFacts WA webpage.





Andrew began working in the Geraldton office as an entomologist in 2023. Before moving to Geraldton with his family, Andrew was working on his PhD at Murdoch University on the chemical ecology of natural enemies of the green peach aphid.

Andrew is particularly interested in bugs that eat other bugs and has been fascinated by insects and arachnids from when he was young. Whether it was watching ants as a toddler, or starting a grasshopper catching business with his sister and cousin in Darwin (where they made 70 cents for each grasshopper), to keeping pet spiders and volunteering at the WA Museum Boola Bardip in Perth, Andrew is always looking at arthropods.

Andrew is currently working on the GRDC funded Dongara weevil project and supporting DPIRD's pest and disease surveillance.

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