PestFacts WA

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Contents

Red leather leaf in oats

- Beverley

Red leather leaf on oats. Photo courtesy of DPIRD.

Hari Dadu, the Pulse pathology subprogram leader from the South Australian Research and Development Institute, recently found red leather leaf (RLL) in oats in Beverley when visiting Western Australia (WA).

This foliar disease is caused by the fungus *Neospermospora avenae* and was first detected in WA oat crops during the 2021 growing season.

While the disease (or confirmation of its presence) is fairly new to WA, it has known to be present in eastern Australia (Victoria) since 1978 and is now recognised as the most common and severe disease of oats in higher rainfall regions of south-eastern Australia.

The distribution, incidence and severity of RLL in WA, is still relatively unknown. Prior to this season, it has been found in oat crops near Narrogin, Piesseville and Pingelly in WA.

Biology and symptoms

The fungus is carried on seed and infected stubble, and the disease is favoured by cool, wet weather, which supports movement of the disease up the crop canopy.

Red leather leaf lesions on an infected oat leaf. Photo courtesy of DPIRD.

Symptoms include distinct lesions on leaves, featuring a lighter centre (white/grey/blue) with dark margin (red/brown). Over time, these develop into red, irregular shaped lesions that spread across the leaves. As affected leaves age, they take on a leathery appearance and a red-brown colour.

If you have any oat leaf samples that you suspect may have RLL, please contact Department of Primary Industries and Regional Development (DPIRD) Research Scientist Kylie Chambers on +61 8 9690 2151.

This disease can cause significant yield and quality losses in both hay and grain oats in the eastern states, with yield losses greater than 10% possible in susceptible varieties during favourable seasons. Damage is more severe when infection begins at early growth stages (tillering) and when cool, wet conditions promote disease development into the upper canopy. It is most likely to be a concern for oat growers in the cooler, high-to-medium rainfall zones of the Great Southern region, where oats are more common and seasonal conditions, particularly in winter, are more favourable. The cool wet conditions

experienced this season across the WA wheatbelt, could be conducive to RLL development.

Management

Crop rotation, along with sowing uninfected (clean) seed, is the primary management approach for RLL.

Selecting moderately susceptible or better oat varieties is another option. Disease resistance assessments for RLL are not currently conducted in WA. For RLL disease ratings please refer to the Grains Research and Development Corporation (GRDC) National Variety Trials (NVT) online disease ratings. For more information on other oat disease ratings, refer to DPIRD's 2025 WA Crop Sowing Guide.

Applying a registered foliar fungicide, particularly at early plant growth stages and during early infection, can also reduce the incidence and impact of this disease. For more information on registered fungicides and application timings please, refer to DPIRD's Fungicides page and the product label.

More information

For more information on this disease refer to:

- DPIRD's Leaf diseases and their management in oats factsheet
- AgriFutures Australia's Red leather leaf of hay oats disease management guide
- Agriculture Victoria's Red leather leaf of oats page.

For more information on oat diseases contact Research Scientist Kylie Chambers in Northam on +61 8 9690 2151 or Principal Research Scientist Geoff Thomas in Perth on +61 428 947 287.

Article authors: Cindy Webster (DPIRD Narrogin), Kylie Chambers (DPIRD Northam) and Geoff Thomas (DPIRD Perth).

Native budworm caterpillars exceeding thresholds in some locations

Caterpillar activity

- Allanooka
- Carnamah
- Coorow
- Merredin
- Bodallin
- Beaumont
- Howick

A native budworm caterpillar chewing into a canola pod. Photo courtesy of DPIRD.

Native budworm (*Helicoverpa punctigera*) caterpillars have exceeded economic threshold levels in some canola, lupin and vetch crops in northern, eastern and southern areas of the grainbelt.

Geoff Fosbery (ConsultAg) has found 5 to 15 budworm caterpillars per 10 sweeps in flowering/podding canola crops at Coorow and Carnamah this week. Most were less than 15 mm in length suggesting recent hatching from eggs, and the increase in caterpillar numbers has coincided with the increased daytime temperatures. He also found low numbers of diamondback moth larvae, 2 to 5 per 10 sweeps, and is considering a selective insecticide like cyantraniliprole (Exirel®) to target both pests while protecting the natural enemies that may help reduce subsequent pest pressure through to crop desiccation.

Native budworm caterpillars sweep netted from a canola crop. Photo courtesy of Quenten Knight (Agronomy Focus).

Quenten Knight (Agronomy Focus) has reported finding 6 or more caterpillars per 10 sweeps in a canola crop near Beaumont, shown in the photo above.

Department of Primary Industries and Regional Development (DPIRD) staff found above threshold native budworm caterpillars at two canola surveillance sites last week. At Allanooka, 9 to 30 budworm caterpillars per 10 sweeps were found, along with predatory lacewing adults and parasitoid wasps. At Howick, 6 to 9 budworm caterpillars per 10 sweeps were found.

A native budworm trapper has found above threshold caterpillars in vetch southeast of Merredin, and below threshold caterpillars in a canola crop southeast of Bodallin. Many predatory insects were noted in the canola in Bodallin. The vetch was sprayed while the canola crop will continue to be monitored for native budworm caterpillar numbers and beneficial insect activity.

Back Paddock users have reported native budworm caterpillars feeding on canola and lupins (var. Coyote) in the Geraldton area.

Crop susceptibility

Canola and lupin pods become more attractive to native budworm caterpillars as the crop nears maturity, and feeding damage can results in crop losses.

It is likely that native budworm caterpillars found in canola and lupin crops now will coincide with pods maturing and losing their green colouration, which is when they are most attractive to caterpillars.

The feeding behaviour and damage potential of native budworm caterpillars vary depending on the type of crop they are feeding on. Field pea, chickpea, lentil and faba

bean crops are very susceptible to caterpillars of all sizes during pod formation and development. Tiny caterpillars can enter developing pods and damage the seed or devour the entire contents of the pod. Narrow-leafed lupin pods and seeds are not usually damaged by native budworm until they are close to maturity and the pods are losing their green colouration. Pod walls are not penetrated until the caterpillars are over 15 mm in length. Canola is similar to narrow-leafed lupin in that its pods usually become more attractive to caterpillars as the crop nears maturity and begins to hay off. Caterpillars of all sizes will enter pods at this stage, with larger caterpillars doing the most damage. However, this may not always be the case, highlighting the need for vigilance.

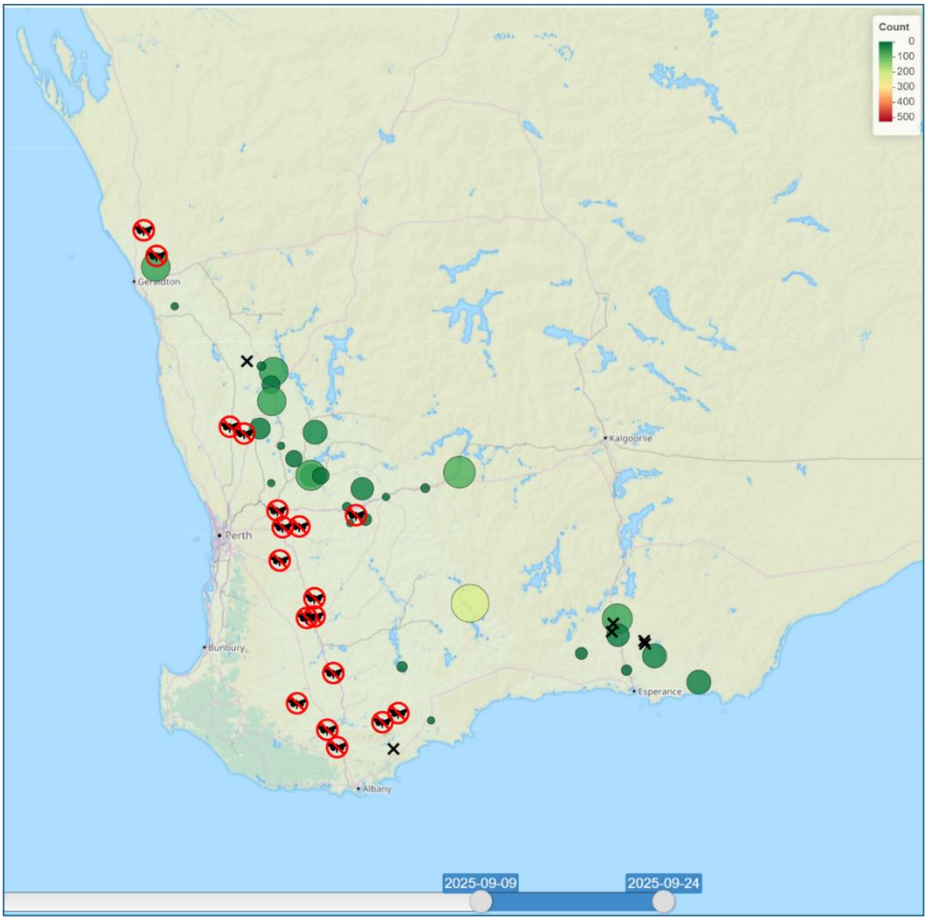
Read more about crop susceptibility and calculating spray thresholds in the 2025 PestFacts WA Issue 14 article Check your crops for native budworm caterpillars.

Moth trapping update

Over the past week, volunteer trappers have reported the following native budworm moth counts: Durawah (lupins 58 moths), Salmon Gums (16), Wyalkatchem Sth (3), Dowerin (lupins 2, canola 1), Bodallin SE (canola 2), and Merredin SE (vetch 1).

Over the past fortnight, volunteer trappers and DPIRD staff have reported moth counts from: Varley (lupins 112 moths), Howick (canola 25 moths), Grass Patch NW (Gunyah peas 24), Cascade (canola 3 moths), Gibson (canola 2), Allanooka (canola 1), Maya (canola 2), Bolgart (canola 1) and Narraloggan (canola 1).

All moth counts from early to mid-September are shown in the map below.



A MothTrapVis map showing native budworm moth trapping results from 9 to 24 September 2025. X indicates no data, and the red and black moth symbol indicates no moths in trap. Map courtesy of Cesar Australia.

A mapped view of all recent native budworm trap captures is available at Cesar Australia's MothTrapVisWA page. Viewers need to select the desired trapping date range.

Eggs laid by native budworm moths will take about 7 days to hatch, and a further 2 weeks to reach a detectable size (5 mm) in crops. These development times are based on average spring temperatures. Some areas are experiencing higher than average spring temperatures, which will mean that development times of larvae in these areas will be shorter.

Further information

Detailed information on this pest can be found at the department's Native budworm page.

To read about prior native budworm activity this season refer to the 2025 PestFacts WA articles in:

- Issue 16 Native budworm caterpillars are attacking wheat crops
- Issue 15 Native budworm caterpillar update
- Issue 14 Check your crops for native budworm caterpillars
- Issue 12 Native budworm migration update
- Issue 10 Why are we seeing native budworm larvae so early?
- Issue 9 Native budworm moth update

- Issue 8 Native budworm moth flights have started
- Issue 7 Native budworm moth trapping program will begin in July. Would you like to host a trap?

For further information on native budworm contact Senior Research Scientist Dusty Severtson in Northam on +61 8 9690 2160 or Research Scientist Andrew Phillips in Geraldton on +61 8 9956 8567.

Article author: Bec Severtson (DPIRD Northam).

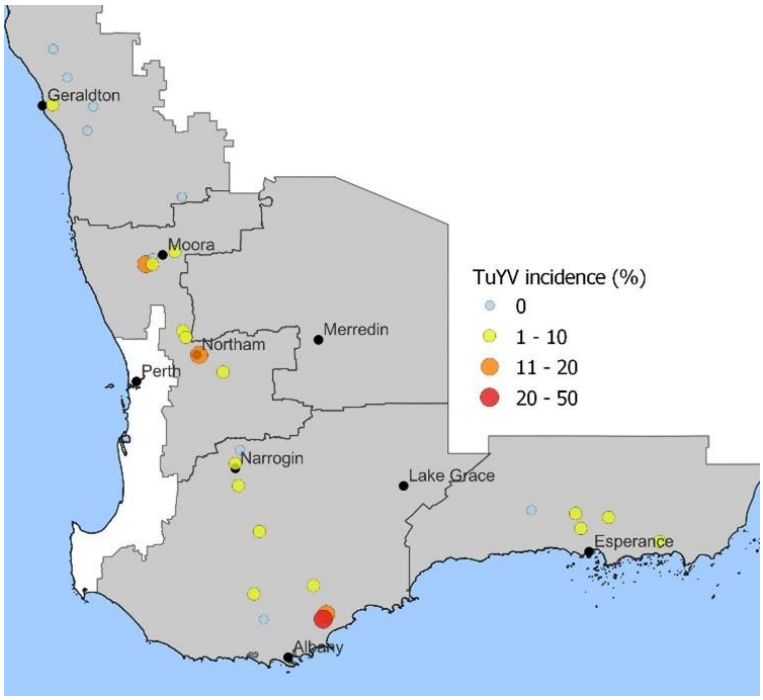
Turnip yellows virus infection levels vary across the grainbelt

- Geraldton port zone
- Kwinana West port zone
- Albany port zone
- Esperance port zone

Turnip yellows virus infected canola plant growing at Northam. Photo courtesy of DPIRD.

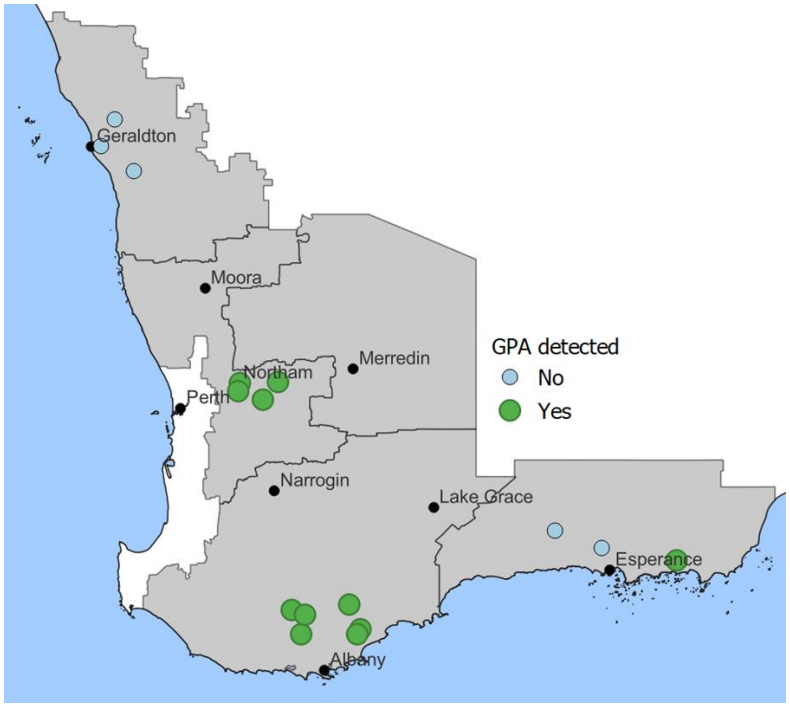
The Department of Primary Industries and Regional Development's (DPIRD) grains virology team spent the first two weeks of September conducting their annual virus surveillance program. Cereal, canola and pulse crops were sampled and tested for more than a dozen different common viruses.

Turnip yellows virus (TuYV) in canola has been the most commonly detected virus in Western Australian (WA) grains crops over the past five years. This is likely because it is transmitted by the green peach aphid (GPA) in a highly proficient manner. As GPA is difficult to control due to its cryptic behaviour and insecticide resistance profile, by extension TuYV is too.



Turnip yellows virus incidence (% of crop infection) across the WA grainbelt, current to 24 September 2025. Map courtesy of DPIRD.

In 2025, TuYV was detected at low to moderate levels at many sites, as shown in the map above. Infection levels were highest in regions where GPA established in canola crops earlier (Albany and Kwinana West port zones), and lowest where GPA established later (Geraldton port zone and parts of the Esperance port zone). This is shown in the GPA detection map below.



Green peach aphid (GPA) detection on yellow sticky traps and canola crops across the WA grainbelt, as of 24 September 2025. Map courtesy of DPIRD.

TuYV symptoms were recorded in infected crops, including some stunting and purpling of lower leaves (symptoms that are easily confused with nutrient deficiency and abiotic stress). Whilst TuYV was observed to be causing low levels of damage in some crops across the grainbelt, it was not causing major damage as seen around Geraldton in 2024. For more information on this, refer to the 2024 PestFacts WA Issue 14 article High levels of turnip yellows virus detected in the Geraldton port zone.

TuYV also infects grain legume crops, but this season it was only detected in a single lupin crop near Northam. The impact of TuYV on narrow-leaf lupin yield is unknown but currently being assessed.

Management

Now that most canola crops are flowering and/or podding across the WA grainbelt, foliar insecticides are not recommended.

The risk of TuYV is highest when TuYV reaches high infection levels prior to flowering. Since TuYV cannot be sprayed out, foliar insecticides become ineffective once infection levels are high. Furthermore, any new virus transmission that occurs after flowering begins is unlikely to cause yield loss and does not warrant foliar insecticide application.

For more information on TuYV management, refer to DPIRD's Turnip yellows virus and its management in canola factsheet.

Effective chemicals currently available in Australia for control of GPA are limited as GPA has evolved resistance to many insecticides. For more information see the Grains Research and Development Corporation's (GRDC's) Green peach aphid – best practice management guide and Aphid and insecticide resistance management in grain crops.

For registered insecticide recommendations, refer to DPIRD's 2025 Winter Spring Insecticide Guide.

What is the insecticide resistance status of green peach aphid in my region?

As part of a GRDC investment, Cesar Australia is offering insecticide resistance testing of GPA at no additional cost to grain growers and advisors. For more information, visit Cesar Australia's Insecticide resistance testing service for green peach aphid page.

Further information

For more TuYV management information, refer to DPIRD's Turnip yellows virus and its management in canola factsheet.

For more information about earlier GPA and TuYV activity this season, refer to the 2025 PestFacts WA articles in:

- Issue 11 Low levels of turnip yellows virus detected in Albany and Kwinana West port zones
- Issue 9 Green peach aphids widespread, but turnip yellows virus detection remains low
- Issue 8 Green peach aphid beginning to infest canola crops in Albany and Kwinana West port zones
- Issue 6 Green peach aphid and turnip yellows virus detected

- Issue 5 No green peach aphid detected yet in DPIRD monitoring
- Issue 1 Enhancing aphid and virus control in canola: beyond seed treatments.

For further information contact Senior Research Scientist Benjamin Congdon in Perth by e-mailing Benjamin.Congdon@dpird.wa.gov.au.

Article authors: Benjamin Congdon (DPIRD Perth) and Cindy Webster (DPIRD Narrogin).

Updated 2025 Winter Spring Insecticide Guide

A self-propelled sprayer. Photo courtesy of DPIRD.

The PestFacts WA team has recently updated its 2025 Winter Spring Insecticide Guide to reflect that chlorpyrifos is no longer registered for use on cereal and other grain crops. It also directs users to Cesar Australia's Beneficials chemical toxicity table.

The guide can be downloaded from DPIRD's Insecticide spray guides for crops in Western Australia page, at no cost.

This spray guide lists the chemicals and application rates registered by the Australian Pesticides and Veterinarian Medicines Authority (APVMA) for use of foliar sprays on canola, cereal, lupin, and other grain legume crops to control common invertebrate pests.

Removal of chlorpyrifos registrations

Chlorpyrifos products are no longer registered for use on canola, cereal and legume crops in Australia, following APVMA's final regulatory decision published in the Special Gazette, 3 October 2024. The 12-month transition phase allowing existing stock in the supply chain or on-farm to be used ends on 30 September 2025. Newly manufactured or imported chlorpyrifos products are labelled to exclude most agricultural crops, including canola, cereals and legumes. Chlorpyrifos products are still registered for control of pasture pests.

From 30 September 2025, it will be an offence to possess, supply, or use the cancelled active constituents, chemical products, and products bearing the previously approved labels.

The APVMA sets Maximum Residue Limits (MRLs) to ensure food safety and compliance with domestic and international standards. With the removal of registrations for chlorpyrifos use on canola, cereal and legume crops, exporters must adhere to the MRLs of importing countries, which may differ from Australian standards. To ensure compliance, growers should consult their grain marketer and stay updated on any changes to MRLs in key export markets.

Beneficials chemical toxicity table

The Beneficials chemical toxicity table has been developed to help growers and advisors make informed decisions about the insecticides and miticides they use in their crops. This

information represents a collaboration between Cesar Australia and University of Melbourne, with investment from the Grains Research and Development Corporation (GRDC) as part of the Australian Grains Pest Innovation Program (AGPIP).

More information

The 2025 Winter Spring Insecticide Guide is intended as a reference only. Always read chemical labels before applying insecticides. Not all insecticide trade names may be listed, so consult retailers for other registered options.

Visit the department's Insecticide spray guides for crops in Western Australia page to access the guide and learn more about insecticides, insect pest monitoring and beneficial insects.

For more information contact Senior Research Scientist Svetlana Micic in Albany on +61 8 9892 8591.

Article authors: Cindy Webster (DPIRD Narrogin) and Bec Severtson (DPIRD Northam).

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