Department of Primary Industries and Regional Development
GOVERNMENT OF WESTERN AUSTRALIA
Protect Grow Innovate

PestFacts WA

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- Moora
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Oat aphids on a cereal leaf. Photo courtesy of DPIRD.

Oat aphids have recently been found in a wheat crop near Maya. They have also been found in barley near Moora, Northam, Needilup and Jerdacuttup.

Cereal aphids have also been found in a wheat crop near Goomalling.

Russian wheat aphids on barley. Photo courtesy of Quenten Knight (Agronomy Focus).

Quenten Knight (Agronomy Focus) has reported finding Russian wheat aphids in a wheat crop (var. Scepter) near Howick and barley crop (var. Neo CL) near Myrup.

A corn aphid (left), oat aphids (middle) and a Russian wheat aphid (right). Photos courtesy of DPIRD.

The three main cereal aphids in WA are corn aphids, oat aphids and Russian wheat aphids. As the weather warms up, growers are reminded to check their cereal crops for aphids, especially the paddock edges, as the favourable conditions encourage rapid population growth.

For tips on identifying cereal aphids, refer to the 2025 PestFacts WA Issue 11 article Cereal aphids.

Monitoring and management

Stressed plants are at most risk to aphid pressure, which can result in significant yield loss. Aphids can also transmit viruses, such as Barley yellow dwarf virus (BYDV), which is transmitted by oat aphids, and has been detected in wheat and barley crops in the Albany and Esperance Port Zones. For more information on aphid and virus control, refer to the Barley Yellow Dwarf Virus article in this issue

Barley crops are most at risk from corn and oat aphids due to the possibility of downgrading from malt to feed quality, as aphid feeding damage can cause grain shrivelling. If 50% of tillers have 15 or more aphids then the feeding damage may cause reductions in yields by up to 10% and reduce grain size. Yield loss is greater in crops that had aphid colonisation from early tillering. Russian wheat aphid (RWA) thresholds are dependent on the crop stage, the time until head emergence, predicted yield and cost of spraying. A RWA threshold calculator is available on GRDC's Russian wheat aphid page.

For a list of insecticides registered for use on cereal aphids see DPIRD's 2025 Winter Spring Insecticide Guide.

Remember that naturally occurring parasitoids and predators such as hoverflies, wasps, lacewings and ladybird beetles will also increase with warming weather. These predators can keep aphid populations below threshold levels and un-necessary spraying of "anti-feed" synthetic pyrethroid sprays will only counteract their benefits. When spraying, consider spray options that are soft (for example pirimicarb) on predators. Growers should check canola crops for fungal infections and parasitism in aphids before deciding whether to invest in an insecticide spray. For more information, refer to Cesar Australia's Beneficial's chemical toxicity table page.

More information

To read about earlier cereal aphid activity this season, refer to the 2025 PestFacts WA Issue 11 article Cereal aphids.

For more information on cereal aphids refer to DPIRD's Aphid feeding damage and its management in cereal crops factsheet.

For more information contact Senior Research Scientist Svetlana Micic in Albany on +61 8 9892 8591, Research Scientist Andrew Phillips in Geraldton on +61 8 9956 8567 or Senior Research Scientist Dusty Severtson in Northam on +61 8 9690 2160.

Article author: Andrew Phillips (DPIRD Geraldton).

Barley yellow dwarf virus

- Goomalling
- Manypeaks
- South Stirlings

Oat plants infected with barley yellow dwarf virus near Manypeaks. Photo courtesy of: Bridget Smith (Elders).

Barley yellow dwarf virus (BYDV) has been reported in wheat and oat crops in the Kwinana west and Albany port zones, following significant cereal aphid activity in these regions. BYDV-like symptoms were reported by Bridget Smith (Elders) in crops around the Albany region and in a wheat crop (var. Illabo) near South Stirlings and an oat crop (var. Forester) growing near Manypeaks. Samples were then tested in the DPIRD virology laboratory and confirmed positive for BYDV. Subsequently, BYDV-like symptoms (leaf yellowing) have been found in wheat near Goomalling, cereal aphids were present in that crop.

Barley yellow dwarf virus-like symptoms in wheat near Goomalling. Photo courtesy of Scott Thomson (Central Ag).

In WA, BYDV and cereal yellow dwarf viruses infect wheat, barley, oats and grasses and are transmitted primarily by the oat and corn aphids. Growers are advised to check their cereal crops for aphids on a regular basis, as early detection will allow management decision to be made to minimise yield and quality losses.

Symptoms

Barley yellow dwarf virus symptoms can vary and can be confused with symptoms caused by nutrient deficiencies, waterlogging and other plant stresses that cause yellowing, reddening and striping of leaves. Leaf symptoms differ between barley, oats and wheat. The severity of symptoms is influenced by the age of the plant at infection, environmental conditions, the virus present and the variety.

In barley the symptoms are yellowing of the older leaves, starting with some striping from the tip of the leaf towards the base. In some varieties, the leaf tips turn red. Barley plants that are infected early have shrivelled grain and produce low yields. Plants infected after tillering exhibit milder symptoms and less yield loss.

In oats, most varieties develop crimson, pink reddening of the leaves from the tips down. However, some varieties only develop a yellow/orange colouration. Young leaves often have yellow stripes. Stunting, an increase in sterile tillers, or abortion of florets result in low grain yields and shrivelled grain.

Infected wheat plants develop a slight to severe yellowing or pale striping between veins in young leaves. Leaf tips can also die. If a susceptible variety is infected before tillering the

plant is usually stunted, has fewer tillers and more sterile tillers. Like barley and oats, the plant matures early, yield is reduced, and grain is shrivelled. If infection occurs later in the plant growth stage, the symptoms are milder.

This virus can often be distinguished from nutritional deficiencies by its pattern of spread.

After initial infection of a single plant, virus infected aphids may move from this to neighbouring plants and the infection spreads outwards in a circle. As well as circular patches of yellowing or reddening plants, virus spread is often found along the margins of crops.

Management

Sow resistant varieties

Cereal varieties also vary in their susceptibility to BYDV. For more information on variety resistance ratings, refer to DPIRD's 2025 WA Crop Sowing Guide.

Seed dressings

In high-risk situations, such as following a wet summer, insecticide seed dressings applied before sowing is recommended.

Delayed sowing

Delayed sowing avoids the autumn peak of cereal aphid activity and reduces the risk of yellow dwarf viruses. However, delaying sowing can reduce yields.

Insecticides

It is recommended where aphids can be seen in tillering crops in high BYDV risk areas, farmers should not delay their insecticide applications or the yield benefits from BYDV control will be minimal. The recommendation for high-risk situations is a first spray of synthetic pyrethroid (SP) insecticide as soon as aphids are seen, or 3 weeks after crop emergence, and a follow up spray 4 weeks after the first spray or 7 weeks after emergence of insecticide treated seed. It is too late to apply SP sprays (whether 1st or 2nd) to prevent BYDV transmission once crops have advanced to the early stem extension stage (GS 31) as BYDV has little significant economic impact if the infection occurs after this growth stage. For insecticide information, refer to DPIRD's 2025 Winter Spring Insecticide Guide.

More information

For more information on BYDV, visit DPIRD's Barley and cereal yellow dwarf viruses and their management factsheet.

For more information contact Senior Research Scientist Benjamin Congdon in Perth by emailing Benjamin.Congdon@dpird.wa.gov.au .

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Native budworm caterpillar update

Caterpillar activity

- Geraldton
- Dalwallinu
- Goomalling
- North Kellerberrin
- Darkan

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

Canola, lupin and pulse growers are urged to continue monitoring for native budworm caterpillars as spring temperatures increase and crops progress through podding. Above threshold levels of native budworm caterpillars have been reported from some central grainbelt areas in the past week.

In a lupin crop near North Kellerberrin, a volunteer native budworm trapper collected four caterpillars per 10 sweeps. The caterpillars were of varying size and likely hatched after a moth migration flight in late-July and mid-August. The crop was sprayed.

An average of three caterpillars per 10 sweeps was detected in a lupin crop near Goomalling, while an average of one caterpillar, 5-10 mm in size, per 10 sweeps was collected in a field pea crop near Dalwallinu. There have also been reports of above threshold levels of native budworm in lupins east of Dalwallinu.

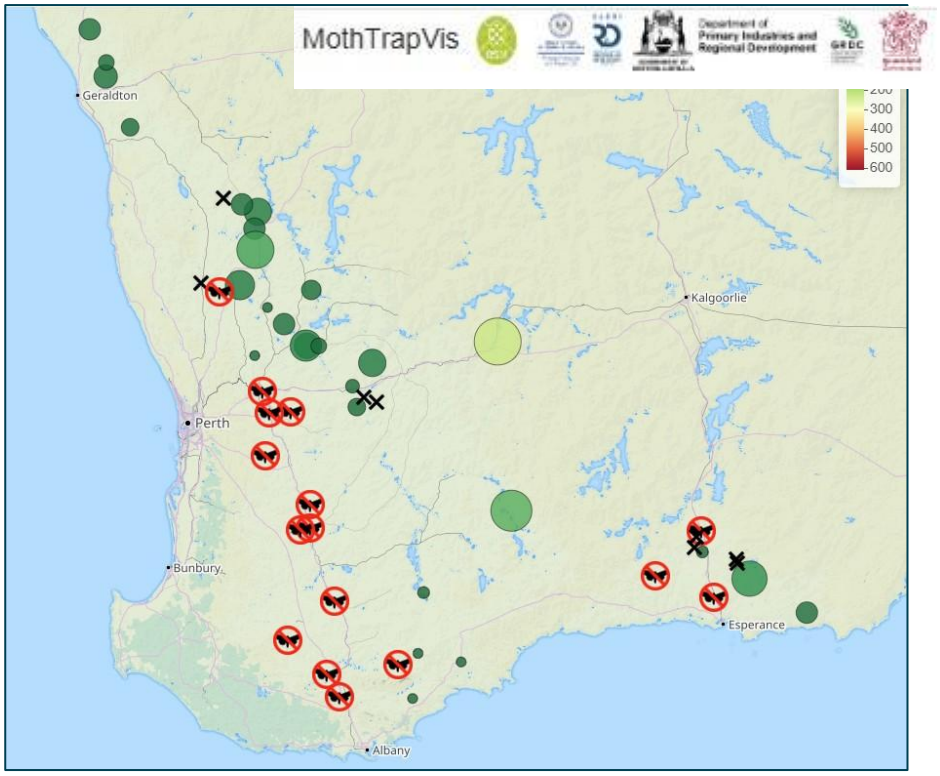
Back Paddock users have reported native budworm caterpillars feeding on wheat (var. Scepter), canola (var. Nuseed Raptor TF) and lupins (var. Jurien) in the Geraldton area.

A MyPestGuide reporter collected native budworm caterpillars in two lupin crops east of Darkan. Caterpillar numbers ranged between 0 to 2 larvae per 10 sweeps in one location, and between 0 to 1 larva per 10 sweeps in another location. The caterpillars varied in size, suggesting several moth migrations from late-July to mid-August. Beneficial insects, including shield bugs, damsel bugs and ladybird beetle larvae, were also found.

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: Southern Cross (lentils 8 moths, chickpeas 87), Dalwallinu (field peas 43), Dowerin (lupins 9, canola 27), Bindi Bindi (canola 16), Durawah (canola 9), Goomalling (lupins 4) and North Kellerberrin (lupins 2). At Baandee North 23 moths were trapped over 2 weeks and at Varley 99 moths were trapped over 4 weeks. Moth counts from early September are shown in the map below.



A MothTrapVis map showing native budworm moth trapping results from 28 August to 9 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.

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 14 article Check your crops for native budworm caterpillars
- Issue 12 article Native budworm migration update
- Issue 10 article 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.

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