PestFacts WA

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Identifying and managing cereal aphids

- Beaumont

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

Quenten Knight (Agronomy Focus) recently reported finding Russian wheat aphid (RWA) in volunteer barley on the edge of a paddock near Beaumont in the Shire of Esperance. He commented that 1 to 10% of the tillers/flower spikes were infested.

The RWA was discovered in the Esperance region in August 2020 and has since spread throughout the broadacre growing regions of WA.

It is expected to have also persisted in the Esperance region over summer in grass volunteers.

RWA has a wide host range of grasses, with barley grass being one of its preferred non-crop hosts. Controlling grass weeds in the proximity of barley and wheat crops will decrease the incidence of this aphid moving onto germinating cereals.

Identifying cereal aphids

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

In addition to RWA, there are two other aphid species, corn aphids and oat aphids, that are commonly found in West Australian cereal crops.

It is important that growers, consultants and agronomists correctly distinguish between cereal aphid species to ensure effective aphid management.

Corn aphids are light green to dark olive green, with darker patches at the base of the tube-like projections (siphuncles) on either side at the rear of the body. Corn aphid colonies are often difficult to detect because they usually develop within the furled leaves of tillers at any time from seedling to head emergence.

Oat aphids are the most abundant cereal aphid species found in WA. Their colour varies from mottled yellow-green through olive-green and dusky brown to a blackish green, and they are characterised by a reddish patch on the tip of the abdomen. Oat aphid colonies develop on the outside of tillers, from the base upwards on stems, nodes and the backs of mature leaves, starting at any time between the seedling stage and grain filling.

Adult RWA adults are only about two millimetres long, pale yellowish green in colour, and covered with a fine waxy coating. RWA have short antennae, and the siphunculi do not extend from the back end. Colonies are frequently found on the newest emerged leaves and hide close to the stem. Infestations on the flag leaf may result in curling of the leaf, trapping the awn and preventing the head from completely emerging. RWA can be found inside and at the base of these rolled leaves.

First to second-instar nymphs of cereal aphids can be particularly hard to identify, so a hand lens is needed to inspect them closely.

Corn and oat aphids are vectors of barley yellow dwarf virus (BYDV), which reduces cereal yield. Crops are most vulnerable to BYDV early in the season. For more information on this, refer to DPIRD's Barley and cereal yellow dwarf viruses and their management factsheet.

The RWA is not a vector for viruses, but during feeding it injects salivary toxins into the plant, damaging chloroplasts and causing leaf striping. The damaged plant tissue will not recover. However, if aphid populations are controlled, new growth will continue normally, and crops usually recover if growing conditions remain favourable.

Growers and consultants can use the PestFacts WA Reporter app to request or confirm identification of aphids, or aphid damage, found in crops.

Managing cereal aphids

For all cereal aphids, yield impacts depend on the percentage of tillers infested with aphids. Regular monitoring of cereal crops to track changes in aphid populations and delaying spraying until aphid numbers reach threshold levels is the recommended management practice.

Inspect crops at several locations within cereal paddocks, as aphid density can vary across the paddock. Look on the stems, undersides of leaves and within the furled growing tips for clusters of aphid colonies.

At each location, walk in a 'w' pattern through the crop, pausing every few paces to check tillers for aphids. Consider counting at least 100 tillers at each location.

Direct feeding damage from aphids occurs when colonies of aphids develop on stems, leaves and heads, usually from the tillering stage through to head filling. The degree of damage depends on the percentage of tillers infested, the number of aphids per tiller and the duration of the infestation. If low numbers of aphids are observed, wait until threshold levels are reached before considering control options.

Russian wheat aphid thresholds are dependent on the crop stage, the time until head emergence, predicted yield and the cost of spraying. A RWA threshold calculator is available on the Grain Research and Development Corporation (GRDC) Russian wheat aphid page.

Barley crops are most at risk from corn and oat aphids due to the possibility of downgrading from malt to feed quality. Aphid feeding damage can cause grain shrivelling. If 50% of tillers have 15 or more aphids, feeding damage may result in yield losses of up to 10% and a reduction in grain size.

Keep in mind that naturally occurring parasitoids and predators, such as wasps, lacewings and ladybird beetles, will increase with warming weather. These predators can keep aphid populations below threshold levels. Unnecessary spraying of "anti-feed" synthetic pyrethroid sprays will only counteract the control offered by the natural enemies.

When spraying is necessary, consider spray options that are soft on predators, such as pirimicarb. For information on insecticide toxicity to beneficial insects, refer to Cesar Australia's Beneficials Chemical Toxicity Table.

Dense aphid colonies are also prone to fungal pathogens. Aphids infected by fungi become sluggish and are covered in white to yellow ‘fur’. These fungi can readily spread throughout aphid colonies and, in some cases, be more effective in decreasing aphid populations than chemical control.

For a list of insecticides registered for use on cereal aphids see DPIRD’s 2026 Winter Spring Insecticide Guide.

Further information

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.

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Slugs are damaging canola

- Kendenup
- Woogenellup
- Dalyup

A black-keeled slug (left) and reticulated slug (right). Photo courtesy of DPIRD.

Black-keeled slugs have been reported damaging canola cotyledons at Kendenup, where 20 hectares of the crop needed to be re-sown, and at Woogenellup, where the crop was baited.

Black-keeled slugs. Photo courtesy of Quenten Knight (Agronomy Focus).

Quenten Knight (Agronomy Focus) has also reported a few patches of crop damage, mostly on clay soil types, caused by black-keeled slugs in canola near Dalyup. The crop was at the 2-leaf stage. The slugs were observed hiding under the clods of clay.

Identification of pest slugs

Slugs are found in the higher rainfall regions of WA and tend to be restricted to soils with a clay content.

Two types of slug species are considered pests of broadacre crops, the black keeled slug (*Milax gagates*) and species of *Deroceras*, with the more common one being the reticulated slug (*Deroceras reticulatum*). Other slug species can be present in the paddock, but they are not crop pests.

The black keeled slug is usually black with a prominent ridge down the back, whereas the reticulated slug is often light grey fawn with mottled markings. Black keeled slugs can burrow 20 cm or more below the surface and are readily able to survive in paddocks which have been burnt. The reticulated slug does not burrow and is less likely to survive in paddocks that have been burnt.

For more information on slug identification visit DPIRD's Identification and control of pest slugs and snails for broadacre crops in WA factsheet and the Grains Research and Development Corporation's (GRDC)'s Slugs in crop: The back pocket guide.

How to check crops and manage slugs

To monitor slug activity in crops, check plants for signs of damage. Night-time checks are recommended, as slugs are most active after dark and are easier to spot on humid, dewy nights when temperatures exceed 10°C. Slugs typically reappear in the same areas of the paddock where they were present in spring. If you're not yet finding slugs in the same parts of paddocks where they were seen in spring, it could be due to insufficient rainfall triggering slug movement. Ongoing monitoring is advised.

Irregular pieces chewed from leaves and shredded leaf edges are typical of slug presence. Damage to canola and legume crops can be difficult to detect if seedlings are chewed down to the ground during emergence.

Slug numbers as low as 1 per square metre can be damaging to a germinating canola crop. For more information, see DPIRD's suggested snail and slug threshold numbers in broadacre crops.

In emerged crops, baiting will have reduced effectiveness as there is a lot of green material that provides an alternative food source for the slugs. Baiting at the highest registered rate and ensuring even bait coverage will lead to a better chance of slugs encountering the baits and feeding on them. If feeding damage is still occurring and you can't see any baits remaining on the ground, then consider reapplying baits, especially if there is a future rain event of 10mm or more predicted.

Baiting will generally only kill 50% of a slug population at any one time, and then mainly the larger ones. Younger slugs may emerge in successive waves. Monitoring slug numbers will determine if there is a need for multiple bait applications, and baiting can be confined to areas of high slug density.

There are two active ingredients registered in Australia for controlling slugs, and these are baits with metaldehyde or Iron EDTA. For registered insecticide recommendations, refer to DPIRD's 2026 Autumn Winter Insecticide Guide.

Metaldehyde baiting must be stopped at least 2 months prior to harvest to ensure baits are broken down and do not become a contaminant of grain.

Further information

For more information on slug monitoring and baiting visit:

- DPIRD's Identification and control of pest slugs and snails for broadacre crops in WA factsheet
- GRDC's Slug control fact sheet: Successful crop protection from slugs
- GRDC's Slugs in crop: The back pocket guide.

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Predatory beetles

- Northam
- Beverley
- Boyup Brook
- Mt Barker

Predatory beetles are this week's featured beneficial insects. In the WA grainbelt, the main ones are carabid beetles, ladybird beetles and rove beetles.

DPIRD has set up automated pit-fall traps in the WA grainbelt as part of the DPIRD and Grains Research and Development Corporation (GRDC) funded National Grains Diagnostics and Surveillance Initiative (NGDSI) remote sensing project. The drying weather has resulted in decreased activity of both pest and beneficial insects captured. Recently though, carabid beetles and rove beetles have been captured in traps at Northam, Beverley, Boyup Brook and Mt Barker.

Carabid beetles

Predatory carabid beetle adult (left) and larva (right). Photos courtesy of: DPIRD.

Carabid beetles belong to the diverse family Carabidae and range anywhere in size from 1 to 60 mm in length. Most adults are dark-coloured and shiny, and some have a metallic sheen. They feature ridged elytra (wing covers), long legs and prominent eyes and mandibles (jaws) for capturing prey. Larvae are slightly flattened with large heads and pincer-like mandibles, and 6 prominent legs. They can be confused with similarly shaped wireworms.

Carabid, or ground beetles, are generalist predators that can provide year-round pest control in your crops and pastures, with more noticeable activity during high pest pressure.

Both larvae and adults feed on a wide range of invertebrates, including caterpillars, aphids, beetle larvae, earwigs, snails and slugs. Adults hide during the day and actively hunt on the soil surface or plant foliage at night, while their ground dwelling larvae seek out prey in the soil.

The caterpillar hunting green carab beetle (Calosoma schayeri). Photo courtesy of: DPIRD.

One of the more commonly found carabid beetles, the metallic green carab beetle (*Calosoma schayeri*), is known for hunting and feeding on caterpillars. It can grow to about 25 mm in length and will squirt a noxious secretion when disturbed. Large numbers are often found swarming around lights.

Ladybird beetles

Ladybird adult (left) and a larva (right). Photos courtesy of DPIRD.

Ladybird (or lady beetle) larvae are long-bodied, dark in colour, with orange markings on the back and protruding jaws. Adults are round-bodied, orange, yellow or red, with black markings.

The three more commonly found species are the white collared ladybird, the common spotted ladybird and the transverse ladybird.

Ladybird larvae and adults feed on aphids, leafhoppers, thrips, mites, moth eggs and small caterpillars.

Rove beetles

Rove beetle collected in canola crop. Photo courtesy of: DPIRD.

Rove beetles do not look like typical beetles and can be distinguished by their short wing covers (elytra) and exposed abdominal segments. They range in size from a few millimetres to several centimetres and are typically black or dark brown in colour. They also have prominent forward projecting mouthparts for consuming insects.

Rove beetles are commonly found under stubbles in paddocks and typically feed on soft bodied insects such as mites and small caterpillars.

Assessing and managing beneficial predatory beetles for pest suppression

A diverse range of predatory beetles may be present under stubble or along crop edges, but they are difficult to detect during the day due to their nocturnal activity and fast movement. Beetles are often found when trapping for ground dwelling pests such as slugs, weevils and earwigs, using refuge or pitfall traps. You can read more about trapping methods in the 2026 PestFacts WA Issue 3 article Tips for effectively monitoring early-season pests.

To support beneficial insects for pest suppression:

- Apply insecticides only when pest levels are at or approaching damage thresholds, or if seedlings loss is occurring and plants are at a density critical for yield.
- Consider using insecticides that are soft on beneficial insects if spraying for pests.

For details on insecticide toxicity to beneficial insects, refer to Cesar Australia's Beneficials Chemical Toxicity Table.

Further Information

The PestFacts WA Reporter app can be used request a diagnosis or report beneficial or pest arthropods.

For further information on beneficial insects, refer to the GRDC Back Pocket Guide – Beneficial Insects .

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2026 Winter Spring Insecticide Guide now available

A self-propelled sprayer. Photo courtesy of DPIRD.

The Department of Primary Industries and Regional Development (DPIRD) 2026 Winter Spring Insecticide Guide is now available for free download.

Updated annually, this spray guide lists the chemicals and application rates registered by the Australian Pesticides and Veterinarian Medicines Authority (APVMA) for use on canola, cereal, lupin and field pea crops and pastures to control common invertebrate pests in WA.

A major change in the 2026 guide is the removal of chlorpyrifos products, which are no longer registered in Australia for use on canola, cereal and legume crops. It is an offence to possess, supply, or use the cancelled active constituents.

A minor change is the removal of cypermethrin 260 g/L.

The APVMA sets Maximum Residue Limits (MRLs) to ensure food safety and compliance with domestic and international standards. 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.

For more insecticide information

The 2026 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 insecticide options.

Visit the department's Insecticides page to learn more about insecticides, insect pest monitoring and beneficial insects.

A 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).

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