PestFacts WA

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Low levels of turnip yellows virus detected in Albany and Kwinana West port zones

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A winged green peach aphid amongst non-winged green peach aphids. Photo courtesy of DPIRD.

The Department of Primary Industries and Regional Development (DPIRD) grains virology team reports that turnip yellows virus (TuYV) has been detected at infection rates of less than 10% in canola crops at multiple sites across the Albany port zone, including Tenterden, Kendenup, Katanning, South Stirling, Wellstead, and at one site in the Kwinana West port zone, at Northam. The vector of TuYV is the green peach aphid (GPA), which has been active in these regions since mid-June.

This aphid and TuYV surveillance is co-funded by the Grains Research and Development (GRDC) project DAW2305-003RTX “Effective virus management in grain crops”.

Canola aphid activity

- Bolgart
- Meckering
- Muluckine
- Kondinin
- Northam
- York
- Woogenellup
- Beaumont

The department’s PestFacts WA team has also been receiving reports of various aphid species in canola crops across the grainbelt.

Green peach aphids have recently been found in canola near Meckering, Bolgart, Northam, York, Woogenellup,

Cabbage aphids have been reported in canola near Kondinin, Muluckine and Northam.

Reports of turnip aphids in canola have come in from areas near Northam, Woogenellup, Beaumont.

To view recent reports of canola aphid activity submitted to the PestFacts WA team, refer to the PestFacts WA map and select ‘canola’ as the host and the relevant aphid species as the disorder from the drop-down menu.

Turnip yellows virus symptoms

Canola plants displaying symptoms of turnip yellows virus. Photo courtesy of DPIRD.

Potential symptoms of TuYV in canola include stunted plant growth and purpling or yellowing of the lower leaves, particularly on leaf margins.

Growers with TuYV symptomatic plants can contact Department of Primary Industries and Regional Development (DPIRD) Research Scientist Dr Benjamin Congdon by emailing Benjamin.Congdon@dpird.wa.gov.au to arrange free TuYV testing to assist management decisions.

This free TuYV testing is offered as part of the GRDC co-funded project DAW2305-003RTX “Effective virus management in grain crops”.

Management

Low levels of TuYV infection are generally not a concern once the canola crop has reached flowering, as the yield impact from late infections is minimal. However, if the crop is still in its vegetative phase, it should be monitored closely for TuYV symptoms and aphids, as TuYV infection can progress rapidly from low levels if GPA are spreading through the crop. Early infections can lead to significant yield losses, so timely detection and management of aphids are important during this stage.

If infective GPA are found, and infestation rate is still relatively low (e.g. less than 30% of plants infested with infective aphids), a foliar spray may be effective in preventing high levels of spread. Once widespread infestation of infective GPA and subsequent TuYV infection occurs, foliar insecticides will not provide any economic benefit in terms of reducing TuYV inflicted yield losses.

It is important to note that monitoring should occur regardless of whether insecticide seed treatments were applied, as these alone are unlikely to prevent TuYV spread.

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

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?

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

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 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 emailing Benjamin.Congdon@dpird.wa.gov.au.

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Cereal aphids

- Northam

Oat aphids. Photos courtesy of DPIRD.

Research Scientist Kylie Chambers (DPIRD) has reported finding oat aphids on several oat varieties in a paddock at the Muresk Institute near Northam. The plants were at the stem elongation growth stage.

Growers and consultants are reminded to check their cereal crops for aphids.

Identifying cereal aphids

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 the newly introduced Russian wheat aphid (RWA).

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, as 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.

Russian wheat aphid (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 does not recover.

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 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 2025 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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