



Agriculture and Food

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Aphids and virus in canola – a 2018 risk guide

Plant virologist Ben Congdon (DPIRD) advises that aphid-borne virus risk for canola crops in WA varies according to recent surveillance he has been coordinating, and it is important to be aware of the risks and act accordingly to protect crops from virus infection.



This year, late summer and early autumn rainfall varied throughout the grainbelt, with the majority experiencing a very dry March and April period. This has had direct implications for virus and aphid risk however the situation can vary from location to location.

In the early part of the growing season, DPIRD has been undertaking an aphid surveillance program at various locations around the grainbelt to obtain on the ground information on migrant aphid numbers and the presence of green peach aphid and Turnip yellows virus (TuYV). As part of this, Ben has been using some new rapid in-field molecular diagnostics (LAMP) to identify aphid and virus species from sticky traps. This information coupled with climatic data allows for more informed predictions of risk for this virus.

High risk – a line from Ravensthorpe to Gibson

On the back of relatively high amounts of February rainfall, aphids have steadily been building up from minimal to high numbers from mid-March to mid-May, TuYV and green peach aphid (GPA) have been detected beginning in early-May. Growers should be on the look out for GPA infestation in canola seedlings, especially those not sown with insecticide treated seed, and be prepared to apply a follow up spray to prevent widespread GPA infestation and TuYV spread in the critical growth stages prior to flowering.

Moderate risk – Albany region

Despite a minimal green bridge resulting from a dry late summer and autumn, TuYV and GPA have been detected in some locations around Mount Barker, South Stirlings and Tenterden. These are likely coming from isolated damp locations such as creek lines. Although it is unlikely that GPA and TuYV will spread to high incidences in young canola crops, growers in these areas should still monitor crops to assess their own individual situation.

Low risk – Cranbrook, Bruce Rock, Grass Patch, Jerramungup, Pingelly, Moora, Northam, York and Wickelbin

Minimal to no migrating aphids have been detected in these areas indicating low risk for infestation and infection in young canola crops.

Looking forward

Aphid numbers migrating into crops usually decrease over the colder winter months before increasing to various degrees, depending upon the magnitude of the reservoirs established during autumn, towards the end of August when conditions begin to warm up.

Turnip yellows virus

TuYV (formerly beet western yellows virus) is the most widespread and damaging canola virus in Western Australia. When crops are infected prior to flowering seed yield losses can reach 50% and significant decreases in various seed quality aspects occur. The risk of virus infection in canola crops is mostly dictated by the amount of rainfall in late summer and early autumn which provides soil moisture for weed and volunteer plants that host both the virus and its main aphid vector - green peach aphid (GPA).

For more information on TuYV and aphids refer to the department's [Diagnosing beet western yellow virus in canola](#) and [Diagnosing canola aphids](#) pages.

For more information contact [Benjamin Congdon](#), Research officer, South Perth on +61 (0)8 9368 3499.

Cabbage aphids are in canola

- Quairading



David Stead (Anasazi Agronomy) has found cabbage aphids in a canola paddock east of Quairading. The aphids were only present in the patches of early germinated canola plants, ranging from stem elongation to early flowering, in the paddock.

Cabbage aphids form dense bluish grey colonies covered with fine whitish powder on flowering heads in spring. They also establish on crowns and under leaves in the vegetative phase. Infestations are usually as 'hotspots' in the paddock. The adult aphid is dull or greyish-green.

Cabbage aphids can feed on canola plants, particularly if warm daytime temperatures are experienced which favour aphid

reproduction and feeding damage.

If more than 20% of plants are infested with colonies of canola aphids, control measures should be considered to avoid yield losses. Pirimicarb and sulfoxaflor are currently registered for aphid control in canola crops in WA. For insecticide information refer to DPIRD's [2017 Winter Spring Insecticide Guide](#).

For more information on identifying and managing canola aphids see the department pages;

- [Aphid management in canola crops](#)
- [Diagnosing canola aphids](#)
- [Aphids in your crops](#) YouTube video.

For more information contact [Svetlana Micic](#), Research Officer, Albany on +61 (0)8 9892 8591 or [Dustin Severtson](#), Development Officer, Northam on +61 (0)8 9690 2160.

An unusual aphid found in barley highlights the importance of correct identification

- Southern Cross



Gary Kenward (Yilgarn Agencies) has found aphids wide spread throughout a seedling Spartacus barley crop near Southern Cross that do not look like a typical cereal aphid. They are dark brown, almost black, in colour with some white markings on the legs. They look quite similar to cow pea aphids, which are not found on cereals.

Gary forwarded a photo of the aphids to the PestFax team for identification whom tentatively diagnosed the aphids as rusty plum aphids (*Hysteroneura setariae*).

Rusty plum aphids (RPA) are known to exist in WA, but the species are not normally considered a pest of broad acre crops.

The RPA is recorded as having a number of grass species as hosts. It is likely that the current aphid populations have built up on grass weeds that favour this species. The RPA have most likely transferred from these grasses onto the current seedling barley crops.

At this stage it is unknown whether the aphids will behave in the same manner as our common cereal aphids, the oat aphid and corn aphid, but it is assumed that the RPA is predominately summer active.

The appearance of this aphid in cereal crops is an opportunity to remind everyone of the free PestFax pest identification service. Readers are encouraged to contact PestFax and send in physical samples if they encounter dark coloured aphids on their cereal crops.

If anyone sees any unusual or out of place pests in a crop take a photo and email it to DPIRD entomologists [Dusty Severtson](#) or [Svetlana Micic](#) for a free diagnosis. We also encourage taking a photo and attaching it to your report when using the [PestFax Reporter app](#).

Mail live specimens for free identification to:

- Department of Primary Industries and Regional Development, 444 Albany Highway, Albany WA 6330, attention to Svetlana Micic.
- Department of Primary Industries and Regional Development, 75 York Road, Northam WA 6401, attention to Dusty Severtson.

For more information contact [Svetlana Micic](#), Research Officer, Albany on +61 (0)8 9892 8591 or [Dustin Severtson](#), Development Officer, Northam on +61 (0)8 9690 2160.

Lucerne flea activity update

- Carnamah
- Badgingarra
- Bindi Bindi
- Elabbin
- Cunderdin

Geoff Fosbery (ConsultAg) has reported finding lucerne flea on two leaf wheat at Carnamah. The lucerne flea were causing patchiness in the crop and making the crop turn grey. There are also lucerne flea on lucerne at Badgingarra. There were patches of 20-200 lucerne flea per square metre observed in the paddock and the lucerne was turning grey from leaf surface feeding damage.



Clare Johnston (Elders) has found lucerne flea causing the typical 'windowing' damage (transparent film in leaf surface left after lower tissue is chewed through by the lucerne flea) in a barley crop near Bindi Bindi. They were not visible in neighbouring barley crops.



Crop protection officer Kylie Chambers (DPIRD) has found lucerne flea in seedling wheat at Elabbin.

David Stead (Anasazi Agronomy) reports that lucerne flea have recently hatched north of Cunderdin in crops sown into silty soils. The lucerne flea are damaging cotyledon to two leaf canola, and newly emerged wheat crops in the area.

It is important to remember that foliar and seed dressing insecticides applied for control of other pests such as redlegged earth mite are not necessarily effective against lucerne flea. For insecticide information on managing lucerne flea and other pests, refer to DPIRD's [2018 autumn/winter insecticide guide](#).

For more lucerne flea information refer to the departments [Diagnosing lucerne flea](#) page and the 2018 PestFax Issue 8 article [Growers and consultants are urged to check for lucerne flea and mites](#).

For more insect information contact [Svetlana Micic](#), Research Officer, Albany on +61 (0)8 9892 8591 or [Dustin Severtson](#), Development Officer, Northam on +61 (0)8 9690 2160.

Barley spot-type net blotch found

- Nokaning



Crop protection officer Kylie Chambers (DPIRD) has found spot-type net blotch (STNB) in a Scope barley paddock at Nokaning. The paddock had also been sown with Scope barley in 2017 and some STNB was experienced but not severe levels. This seed dressing applied this season is not registered to give protection against STNB. The grower plans to apply foliar fungicide later in the season to manage the STNB.

STNB lesions develop as small circular or oval dark brown spots with yellow edges. Infections can occur following around six hours of leaf wetness at temperatures between 10-25°C. Primary inoculum comes from airborne spores, which are produced on stubbles from previous crops. Risk of infection in seedling to tillering growth stages is greatest in barley regrowth and continuous barley which are exposed to infected barley stubble.

Barley varieties that are susceptible to STNB, such as Spartacus CL, that have not been treated with a registered seed dressing against STNB and are sown into in a high risk situation (barley on barley) are particularly vulnerable. Spartacus CL is susceptible to very susceptible (SVS) to STNB as a seedling and adult plant. To see what other barley varieties are susceptible to STNB refer to DPIRD's [2018 barley variety sowing guide for Western Australia](#).

At this time of year net blotches are likely to be an issue only for barley on barley crops. Crops sown with Systiva® or Uniform® should not be exhibiting significant levels of disease.

DPIRD trials with STNB indicate that there is no yield penalty from waiting till late tiller/stem extension for foliar fungicide application onto infected crops. Growers can consider applying a STNB registered foliar fungicide when carrying out post emergent herbicide spraying as plants approach stem extension.

Application of a registered foliar fungicide prior to stem extension (for example, tillering) can reduce disease levels but may still require a follow-up fungicide later in the season. In low rainfall areas follow up fungicides will only result in a yield

response to STNB when the disease pressure is high and there is reasonable spring rainfall or stored soil moisture.

For more fungicide information refer to DPIRD's [Registered foliar fungicides for cereals in Western Australia](#).

For further information on symptoms and management of STNB see DPIRD's [Managing spot type net blotch in continuous barley](#).

For more information contact [Kithsiri Jayasena](#), Plant Pathologist, Albany on +61 (0)8 9892 8477, [Geoff Thomas](#), Plant Pathologist, South Perth on +61 (0)8 9368 3262, [Andrea Hills](#), Plant Pathologist, Esperance on +61 (0)8 9083 1144 or [Ciara Beard](#), Plant Pathologist, Geraldton on +61 (0)8 9956 8504.

New field pea blackspot risk forecast for WA available online



DPIRD's latest [blackspot manager forecast for WA](#) is available online.

Plant pathologist Jean Galloway (DPIRD) says that the dry summer conditions experienced in some areas has resulted in slow maturation of the blackspot fruiting bodies on field pea stubbles this year.

The blackspot risk is high for areas around Bencubbin, Cunderdin, Dowerin, Merredin, Mingenew, Moora, Northam, Tammin and Toodyay. For these areas the agronomic window to sow field pea is closing and there is a yield penalty for late sowing.

In areas where there is not a lot of field pea grown, growers should consider sowing now despite the high blackspot risk. Growers will need to ensure they are not sowing into paddocks that were sown to field pea in 2015, 2016 and 2017 and they are more than 500m away from paddocks (their own and their neighbours paddocks) sown to field pea in 2016 and 2017.

The blackspot risk is medium to low for all shires in the Great Southern and Esperance, so field peas can be sown. Be aware that for some locations the agronomic sowing window is closing and there will be a high yield penalty for late sowing.

Growers and consultants can regularly check their locations blackspot risk as updated forecasts are available weekly at the department's [Blackspot in field peas disease forecast 2018](#) page.

For more information on blackspot refer to the department's [Diagnosing blackspot in field peas](#) page.

To subscribe to the free Blackspot Manager SMS service simply text 'Blackspot', your name and location to 0475 959 932.

Consultants and growers can receive blackspot risk forecasts directly via email by subscribing at Blackspot.Manager@dpiird.wa.gov.au.

For more information contact [Jean Galloway](#), Research Officer, Northam on +61 (0)8 9690 2172, [Mark Seymour](#), Research Officer, Esperance +61 (0)8 9083 1143 or [Ian Pritchard](#), Development Officer, South Perth on +61 (0)8 9368 3515.

All Page Links

- [1] <https://www.agric.wa.gov.au/sites/gateway/files/Winged%20and%20non-winged%20GPA%20on%20turnip%20yellows%20virus%20infected%20canola%20leaf%20Ben%20Congdon%20DPIRD.jpg>
- [2] <https://www.agric.wa.gov.au/mycrop/diagnosing-beet-western-yellow-virus-canola>
- [3] <https://www.agric.wa.gov.au/mycrop/diagnosing-canola-aphids>
- [4] <mailto:Benjamin.Congdon@dpiird.wa.gov.au>
- [5] https://www.agric.wa.gov.au/sites/gateway/files/cabbage%20aphids_0.JPG
- [6] <https://www.agric.wa.gov.au/insecticides/insecticide-spray-guides-crops-western-australia>
- [7] <https://www.agric.wa.gov.au/pest-insects/aphid-management-canola-crops>
- [8] <https://www.youtube.com/watch?v=RFoJaBFxTg8>
- [9] <mailto:svetlana.micic@dpiird.wa.gov.au>
- [10] <mailto:dustin.severtson@dpiird.wa.gov.au>
- [11] <https://www.agric.wa.gov.au/sites/gateway/files/Rusty%20plum%20aphid%20Gary%20Kenward%20Yilgarn%20Agencies%2013June18.jpg>
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- [31] <https://www.agric.wa.gov.au/Mark.Seymour%40dpiird.wa.gov.au>
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