



Agriculture and Food

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Wheat disease update

Diamondback moth caterpillar numbers high in some crops

Aphids are damaging lupin crops

Armyworm continue to cause sporadic damage to cereals

Native budworm moth activity and trapping update

Wheat disease update

Wheat leaf rust

- Woogenellup



Plant pathologist Kith Jayasena (DPIRD) reports finding wheat leaf rust on Mace wheat near Woogenellup. The crop had Jockey seed dressing and one application of Folicur. It was going to be sprayed as soon as weather permitted.

For more information on managing wheat leaf rust later in the season refer to the 2017 PestFax Issue 22 article [More leaf rust found in several wheat varieties up north.](#)

Wheat powdery mildew

- York
- Woogenellup
- South Stirling



King yin Lui (Curtin) reports finding wheat powdery mildew (WPM) in Corack wheat near York. The crop was at milk development.

Plant pathologist Kith Jayasena (DPIRD) reports that WPM is present in Scepter wheat near Woogenellup. The crop had Jockey seed dressing and one application of Folicur. It was going to be sprayed as soon as weather permitted.

Kith also reports that WPM on Scepter wheat has been seen at South Stirling and was going to be sprayed with Propiconazole.

Scepter and Corack are both rated susceptible to very susceptible (SVS) to powdery mildew. Therefore under favourable weather conditions infection could multiply rapidly in both varieties.

For more information on wheat powdery mildew refer to the department's [Managing powdery mildew in wheat](#) page.

Fungicide application information

Fungicide choice needs to take into account the diseases present in a crop. Where a variety is susceptible to both of the diseases present, a fungicide that is registered to control both of them is required. For more fungicide information refer to the department's [Registered foliar fungicides for cereals in Western Australia](#) page.

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Diamondback moth caterpillar numbers high in some crops

- Northern agricultural region (including Carnamah, Badgingarra, Dandaragan, Moora, Dalwallinu)
- Central agricultural region (including Dowerin, Northam, Cunderdin, Tammin, Kellerberrin, Merredin, Bruce Rock)

Canola growers in the northern and central agricultural regions of WA have been discovering recently that

diamondback moth (DBM) caterpillar numbers have dramatically increased. Consequently there are concerns over; supply shortages of insecticides containing emamectin (Affirm®), the higher cost of spinetoram (Success Neo®), and how much damage such high DBM numbers are causing to podding canola crops. Many of these crops are expected to yield much lower than average as it is.



Wayne Birch (Landmark) has found localised outbreaks of DBM in canola crops at the pod fill stage between Badgingarra and Dandaragan, and around Moora. Numbers ranged from as low as eight to as high as 267 caterpillars in 10 sweeps of an insect sweep net. Wayne noted that DBM seemed to be higher on canola in sandy country where plants are likely to be more stressed.



Susie Mason (Elders) has reported that much of a podding canola crop east of Carnamah has completely dried up from DBM feeding damage. Susie said she found in excess of 600 DBM per 10 sweeps.

David Cameron (Farmanco) reports that DBM numbers have been decreasing in Moora and Dalwallinu canola

crops.

Tim Boyes (AgVivo) has been seeing increasing numbers of DBM in crops following recent rains. He found more than 200 caterpillars in 10 sweeps in canola crops at Cunderdin and Northam which have finished flowering.

Jessica Smith (Landmark) reports that DBM numbers in excess of 1000 per 10 sweeps are being found in podding crops from Cunderdin, Meckering, Tammin and Kellerberrin through to Merredin and Bruce Rock.

Zac Rick (Elders) has been monitoring DBM numbers in canola crops in the Cunderdin and Dowerin areas. He noted that caterpillars have been steady at about 100 per 10 sweeps over the past four weeks, but have now risen dramatically to over 300 per 10 sweeps. Zac said that a lot of feeding damage to pods occurred over a very short period of time.

Rod Butcher (Landmark) has found very high numbers of DBM in podding canola crops at Bruce Rock, with some sweep net counts above 750 caterpillars in 10 sweeps. Some crops previously sprayed for DBM have also come back with high numbers.

Entomologist Svetlana Micic (DPIRD) says that DBM caterpillars are generally spread throughout the plant from top to bottom of the canopy, but time of day and leaves senescing and dropping can cause them to move to more upper parts of the plant where sweep netting picks them up.

Svetlana noted that sudden increases in DBM numbers in the sweep net can also be from new caterpillars hatching from eggs. Unlike native budworm, DBM have a short life cycle, especially on warm days and this gives them the ability to increase populations rapidly.

Managing diamondback moth caterpillars

Growers are urged to abide by label withholding periods for swathing/harvesting canola if applying a registered insecticide to control DBM (see the table below).

| Active ingredient | Withholding period (days) |
|--------------------|---------------------------|
| Alphacypermethrin | 21 |
| Emamectin | 14 |
| Esfenvalerate | 14 |
| Gamma-cyhalothrin | 7 |
| Lambda-cyhalothrin | 7 |
| Methomyl | 7 |
| Btk | 0 |
| Spinetoram | 14 |

The pyrethroids (alphacypermethrin, esfenvalerate, gamma and lambda cyhalothrin) and carbamate (methomyl) registered for DBM are known to provide poor kill on DBM populations because of insecticide resistance.

For insecticide options refer to the department's [Winter/Spring Insecticide Guide 2017](#).

For more information on DBM thresholds in advancing canola crops and how to manage DBM refer to the 2017 PestFax Issue 20 article [Diamondback moth activity](#).

For more information refer to the department's [Diagnosing diamondback moth](#) page and GRDC's [Diamondback moth resistance management](#) factsheet.

For more information on DBM contact [Dustin Severtson](#), Development Officer, South Perth on +61 (0)8 9368 3249.

Aphids are damaging lupin crops

- Eradu
- West Casuarinas
- Mingenew
- Moora



Chris Pinkney (Agrarian) reports finding aphids, which have caused hotspots of dead plants, in a podding Mandelup lupin crop at Eradu. Upon further inspection, Chris found clusters of aphids which were dead from a fungus. He also noted that the hotspots became more apparent after a recent hot day.

Aphids are very dependent on temperature and it is likely that the localised aphid populations increased rapidly during warm and dry temperatures causing significant damage to plants before dying off from fungal infection following recent rainfall.



Peter Elliot-Lockhart (Elders) also found hotspots of dead plants in a lupin crop two weeks ago at West Casuarinas. Peter said the crop was sprayed with pirimicarb and aphids had survived, indicating that they are likely to be green peach aphids (GPA) which are known to have resistance to carbamate insecticides. Photos that were later sent in confirmed they were GPA.

A farmer near Mingenew has found hotspots of aphids in his lupin crop which is nearly finished flowering and well into leaf drop. He noted that plants were completely dead within hotspots, and he was concerned that the aphids would spread and become a bigger problem in the coming weeks before harvest.

Wayne Birch (Landmark) has observed that generally low numbers of blue-green aphids are in lupin crops in the Moora region.

Many narrow-leaf lupin varieties, including Mandelup, are rated as resistant to aphid colonisation and feeding damage. However, research conducted by CSIRO has found that resistant narrow-leaf lupin varieties resist cowpea aphid feeding damage, but less so GPA damage. This is supposedly due to a lower concentration of the alkaloid Lupanine.

Yellow lupin varieties that are rated as resistant to aphids resist both cowpea and GPA feeding damage.

For more information see the department's [Identification of aphids in lupin crops](#) and [Management of aphids in Western Australian lupin crops](#) pages.

For more information contact [Dustin Severtson](#), Development Officer, South Perth on +61 (0)8 9368 3249.

Armyworm continue to cause sporadic damage to cereals

- Badgingarra
- Moora
- Mount Madden



Larvae climb the drying stem and lop the head at a green area where it joins the stem.

Wayne Birch (Landmark) has found low levels of armyworm caterpillars in cereal crops between Badgingarra and Moora.

Andrew Smith (ConsultAg) has found six large armyworm caterpillars in 10 sweeps of an insect sweep net in a barley crop at Mount Madden. The crop was at grain fill stage.

Armyworm caterpillars have been causing damage to cereal crops throughout the season in WA, and crops which have been sprayed earlier may still be at risk of armyworm damage if moths have re-colonised crops weeks ago.

Armyworm are known to cause the most economic damage to barley crops when the plants are starting to hay off and they chew or lop the heads off.

Assessing the numbers of armyworm in a cereal crop can be difficult, as their movements will vary with weather conditions and feeding preference. Sometimes they are found sheltering on the ground and under leaf litter whilst on other days they will be high up on the plants or on the heads and easily picked up using sweep nets. This is important to note if sweep netting cereal crops. Larger caterpillars often prefer to hide during the day and feed at night.

The threshold for spraying armyworm in mature barley is about three large armyworm grubs per square metre of crop. The threshold for wheat or oats is much higher as only grains are consumed and heads are very rarely dropped. Spray thresholds in these crops are more like 10 grubs per square metre of crop.

A number of effective insecticides are registered for the control of armyworm if required (see the department's [Winter/Spring Insecticide Spray Chart 2017](#)). Spraying late in the afternoon or evening is recommended as armyworms are predominately night feeders.

For more information refer to the department's [Diagnosing armyworm](#) page.

For more information contact [Dustin Severtson](#), Development Officer, South Perth on +61 (0)8 9368 3249.

Native budworm moth activity and trapping update

- Greenough

- Moora
- Dalwallinu
- Burakin
- Doodlakine
- Varley
- Usual trapping sites across wheatbelt

A budworm trapper near Greenough has found four native budworm caterpillars per 10 sweeps in a lupin crop.

David Cameron (Farmanco) reports finding increasing numbers of native budworm caterpillars in canola crops around Moora and Dalwallinu.



Ty Henning (TekAg) has found between 20-70 budworm caterpillars per 10 sweeps in a Bonito canola crop at the pod ripening stage near Burakin.

A farmer south of Doodlakine has found five caterpillars per 10 sweeps in a lupin crop.

A budworm trapper near Varley has found one caterpillar per 10 sweeps in a field pea crop, while a nearby bean crop had an average of less than one caterpillar per 10 sweeps.

The larger native budworm flights recorded by budworm trappers this week include Eradu (287 moths over 14 days), Binu (80 moths), Cuballing North (12), Wyalkatchem South (19) and Varley (16).

Results of this week's trapping numbers are available at the department's [Native budworm moth numbers 2017](#).

Pesticide options for the control of native budworm can be found in the department's [Winter/Spring Insecticide Spray Chart 2017](#).

Detailed information on this pest and pesticide withholding periods can be found in the department's 2017 PestFax Issue 22 article [Latest native budworm moth activity and management advice](#) and [Management and economic thresholds for native budworm](#) page.

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All Page Links

- [1] <https://www.agric.wa.gov.au/sites/gateway/files/wheat%20leaf%20rust%20pustule.jpg>
- [2] https://www.agric.wa.gov.au/newsletters/pestfax/pestfax-issue-22-september-2017?page=0%2C1#smartpaging_toc_p1_s0_h2
- [3] <https://www.agric.wa.gov.au/sites/gateway/files/Wheat%20powdery%20mildew%20%20King%20yin%20Lui%20Sept17.jpg>
- [4] <https://www.agric.wa.gov.au/spring/managing-powdery-mildew-wheat>
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- [11] <https://www.agric.wa.gov.au/sites/gateway/files/Canola%20plants%20DBM%20damage%20Susie%20Mason%20Elders%20Oct%202017.jpg>
- [12] <https://www.agric.wa.gov.au/sites/gateway/files/Winter%20Spring%20Insecticide%20Guide%202017.docx>
- [13] https://www.agric.wa.gov.au/newsletters/pestfax/pestfax-issue-20-september-2017?page=0%2C3#smartpaging_toc_p3_s0_h2
- [14] <https://www.agric.wa.gov.au/mycrop/diagnosing-diamondback-moth>
- [15] <https://grdc.com.au/resources-and-publications/all-publications/factsheets/2017/06/resistance-management-strategy-for-diamondback-moth-in-australian-canola>
- [16] <mailto:dustin.severtson@dpird.wa.gov.au>
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- [24] <https://www.agric.wa.gov.au/sites/gateway/files/Native%20Budworm%20Moth%20Numbers%202017.doc>
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- [27] <mailto:alan.lord@dpird.wa.gov.au>

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