PestFacts WA

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Contents

Wheat disease update

Seasonal conditions have favoured wheat disease development across parts of WA. With temperatures expected to become warmer and drier, leaf rust and powdery mildew are likely to become less of a concern this season. However, growers and consultants are still encouraged to report any disease detections, keep an eye out for stem rust which prefers warmer weather, and use current observations to inform disease management planning for next season.

Leaf rust and powdery mildew

- Locations ranging from Yuna to Boyatup

Recent plant disease surveillance by DPIRD staff has detected leaf rust and powdery mildew on Vixen wheat near Geraldton and leaf rust in Brumby wheat near Gibson.

Powdery mildew has been reported by DPIRD surveillance staff and Agworld app users in varieties Calibre, Devil, Firefly, and LRPB Sonic near Yuna, Nabawa, Allanooka, Cadoux, Tenterden, Hopetoun, Lort River, Gibson and Boyatup.

Wheat powdery mildew and leaf rust thrive under cool to mild, humid conditions with dew or leaf wetness, but disease pressure usually declines as spring temperatures rise above 25°C and conditions become warmer and drier.

Leaf rust (orange pustules) (left) and powdery mildew (white powdery growth) pustules (right) on Vixen wheat near Geraldton.

Yellow spot and septoria nodorum blotch

- Marrah
- Geraldton
- Ogilvie
- Mount Horner
- Bowgada
- Grass Patch

Septoria nodorum blotch infection on wheat heads is known as glume blotch.

Yellow spot, septoria nodorum blotch and glume blotch in wheat have been reported in wheat near Marrah, Geraldton, Ogilvie, Mount Homer, Bowgada and Grass Patch.

Symptoms

Leaf rust appears as small orange to light brown pustules on leaves and, in severe infections on leaf sheaths. It is important to distinguish from stem rust which is much more damaging to crops and causes darker pustules that can occur on both sides of the leaves, on the stems and the glumes.

Powdery mildew appears as white, powdery fungal growth on leaves and leaf sheaths. As infections age, affected tissue yellows and turns grey, often with small black specks visible.

In WA, nodorum blotch and yellow spot commonly occur together and can be difficult to distinguish. Both cause tan-brown leaf lesions with yellow margins that can expand and merge, leading to extensive leaf damage. Nodorum blotch can also infect heads (glume blotch), causing dark blotching on glumes and shrivelled grain, resulting in yield and grain quality losses. Some wheat varieties have some resistance to nodorum blotch leaf infection but are susceptible to glume blotch.

Management reminders

Consider varietal disease rating when selecting wheat varieties for 2027. Readers can refer to DPIRD's 2026 WA Crop Sowing Guide.

It is important to optimise control of nodorum blotch on upper leaves to reduce risk of infection of heads. This can be best achieved by applying a registered fungicide before or during crop heading. The free decision support tool YellowSpotWM can be used to help growers making economically informed fungicide decisions for managing yellow spot in wheat. At most locations it is unlikely that fungicide application for these diseases will give a positive return on investment at this time of year.

Spraying after crop flowering is not recommended for leaf rust and powdery mildew. As the season progresses and warmer, drier conditions occur, the likelihood of an economic response to fungicide will diminish. In many locations and crops this time has already passed.

If applying a fungicide, it is important to follow fungicide label recommendations for application rates and withholding periods for fungicides. Also rotate fungicide groups to help minimise development of fungicide resistance, for more information refer to the Grains Research and Development Corporation's (GRDC) Fungicide resistance management in Australian grain crops publication and DPIRD's Fungicides page.

Control volunteer cereals and regrowth over summer and autumn to reduce rust survival between seasons.

Rust pathotype testing

Growers and agronomists are encouraged to send samples of all rusts for pathotype testing at any time of the year to the Australian Rust Survey. For further details refer to the University of Sydney's Australian Cereal Rust Survey page.

Testing for powdery mildew fungicide resistance

Growers and consultants who suspect fungicide resistance in powdery mildew in a crop can contact the Centre for Crop and Disease Management's (CCDM) fungicide resistance team by emailing frg@curtin.edu.au for further information.

Yellow spot and septoria nodorum blotch samples wanted

DPIRD is still seeking wheat leaf samples suspected of yellow spot or septoria nodorum blotch to help validate a new rapid diagnostic test. If you have suitable samples, please email Senior Research Scientist Kylie Chambers or Technical Officer Masood Anward. Send samples in a paper bag (not plastic) to Masood Anward or Kylie Chambers, DPIRD, 75 York Road or PO Box 483, Northam WA 6401. Please include your contact details, the closest town where the sample was collected, and the wheat variety.

Further information

For more information on leaf rust, refer to DPIRD's Leaf rust and stripe rust and their management in wheat factsheet.

For more information on powdery mildew, visit DPIRD's 2026 PestFacts WA Issue 10 article Powdery mildew in wheat and Powdery mildew and its management in wheat factsheet.

For more information on diagnosing and managing yellow spot and septoria nodorum blotch, refer to:

- DPIRD's 2026 PestFacts WA Issue 13 article Yellow spot and septoria nodorum blotch in wheat.
- DPIRD's Yellow spot and septoria nodorum blotch and their management in wheat factsheet
- Centre for Crop and Disease Management (CCDM) article Outwit, Outplay, Outlast: Yellow leaf spot versus septoria nodorum blotch.

For more information on cereal diseases, contact Senior Research Scientists Kithsiri Jayasena in Albany on +61 (0)8 9892 8477, Andrea Hills in Esperance on +61 (0)8 9083 1144, Ciara Beard in Geraldton on +61 (0)8 9956 8504, Kylie Chambers in Northam on +61 (0)8 96902151, Research Scientist Jason Bradley on +61 (0)8 9368 3982 or Principal Research Scientist Geoff Thomas in Perth on +61 (0)428 947 287.

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Article input: Zia Hoque (DPIRD Perth).

Australian plague locust spring hatchings have started

- Southern Cross

Australian plague locust nymphs hatching from their egg bed. Photo courtesy of Australian Plague Locust Commission.

Growers and consultants are reminded to monitor areas where Australian plague locusts (APL) were active earlier in the season, as spring hatchings have started.

Joshua Cope (Nutrien) reports finding APL nymphs at Southern Cross in areas where adults were sighted in autumn.

Green feed along roadsides and paddock edges will provide a food source for hopper development to the adult growth stage.

Crop risk is generally low close to harvest, as APL tend to be restricted to crop edges and avoid dense crops. However, crops that are greener when locusts begin to hatch, particularly later-sown crops, may be vulnerable to adult locust activity.

Please report any APL hatchings to DPIRD's PestFacts WA team via the PestFacts WA Reporter app.

Identification of APL hoppers

Australian plague locusts (APL) (*Chortoicetes terminifera*) are a native species and are sometimes found alongside a range of other similar looking grasshoppers. For more detail on identifying other locust and grasshopper species, refer to DPIRD's 2026 PestFacts WA Issue 4 article Australian plague locusts are active.

Correct identification is important as insecticide recommendations can differ between species.

Key features of APL include:

- X-shaped marking behind the head (more visible in older nymphs).
- Adults have a distinctive elongated black smudge on an otherwise clear hind wing.
- Red hindleg shanks (tibiae).

An adult Australian plague locust.

APL lay egg pods containing 30 to 55 eggs, typically 3 to 10 cm below the soil surface. Most autumn-laid eggs enter winter diapause and hatch in spring. Activity increases in warm conditions.

Management

Crops

For crops, hopper and adult locust numbers should be closely monitored, and if any damage is observed, consider applying insecticides. Follow label instructions regarding harvest withholding periods if applying insecticides.

Pastures

Consider control measures if hopper densities exceed 20 per square metre, or there are more than 10 APL adults per square metre, and if the feeding value of pastures is equivalent to the cost of replacement feed for livestock.

Applying insecticides across entire paddocks may be necessary to prevent extensive damage from locusts. To achieve effective control, the best time to apply an insecticide is when locusts are hoppers. Follow label instructions for grazing withholding periods when applying insecticides.

Treating small areas of dense masses of hoppers immediately after hatching can also be worthwhile but will only control a relatively small proportion of the total numbers within a paddock and may involve several sprays as hatching times are staggered.

Sprays must be applied directly onto the locusts and the vegetation on which they are feeding. Barrier spraying to keep locusts out of an area is not effective. Pastures that tend

to remain greener longer such as lucerne and long-season annual pastures are at greater risk of attack.

If swarms develop, rapid treatment is required soon after arrival to minimise damage.

Monitor frequently from spring onwards if large infestations are present in your area.

For insecticide information relating to APL management, refer to Agriculture Victoria's Australian plague locust chemical use and crop residues page.

Locust risk for 2027

The potential risk of APL to WA crops next year will depend on how much rainfall is received over summer.

If there is summer rainfall, inspect paddocks in early autumn for grasshoppers and APL.

Managing summer weed hosts (green bridge) over summer will decrease the risk of APL and grasshoppers being present at seeding.

Further information

Previous APL activity reports received by the PestFacts WA team this season can be viewed on the PestFacts WA map or read in DPIRD's 2026 PestFacts WA Issue 4 article Australian plague locusts are active.

Further APL information can be found at Cesar Australia's Australian plague locust PestNote, and by listening to the DPIRD Grains Convo podcast episode Australian plague locusts and grasshoppers.

For more information, contact Senior Research Scientist Svetlana Micic in Albany on +61 (0)8 9892 8591.

Article authors: Cindy Webster (DPIRD Narrogin) and Svetlana Micic (DPIRD Albany).

Check your crops for native budworm caterpillars

Growers are reminded to check crops for caterpillars following increased native budworm moth flights across parts of the central, eastern and southeastern grainbelt.

While moth activity has decreased in the northern grainbelt, low moth trap catches do not necessarily mean a low risk of caterpillar damage. Crop types vary in their attractiveness to egg-laying moths, meaning moth catches do not always reflect the level of caterpillar risk within individual paddocks.

Noting caterpillar size is important. Small caterpillars can quickly become damaging in chickpeas, field peas, faba beans, albus lupins and lentils during all stages of pod formation and development.

In narrow-leafed lupins, pod and seed damage generally occurs when pods lose their green colouration and by caterpillars over 15 mm in length. Canola is similar and is more attractive to caterpillars as the crop nears maturity and begins to hay off. However, caterpillars of all sizes will enter canola pods at this stage, with larger caterpillars doing the most damage.

Warmer weather accelerates caterpillar development, increasing the potential for economic damage to developing pods and seeds.

Caterpillar activity update

- Locations ranging from Yuna to Gibson

A native budworm caterpillar eating a lupin plant.

Some early sown canola crops near Merredin have been sprayed for native budworm caterpillars. Caterpillars are now being found in some vetch and chickpeas near Merredin and numbers will be monitored. Lupins remain at lower risk of caterpillar damage as leaf drop hasn't started.

Up to 8 native budworm caterpillars per 10 sweeps in canola have been reported at East Perenjori. Lower numbers of caterpillars have been detected in canola and lupin crops at Bindi Bindi, Perenjori and North Kellerberrin by volunteer native budworm trappers.

Agworld users have reported native budworm damage in canola at Yuna, in serradella and canola at Northampton, lupins near Geraldton, and on field peas near Munglinup.

Below threshold numbers of native budworm caterpillars have been found during September at DPIRD's Mingenew, Northam, Cascade and Gibson canola surveillance sites. At Mingenew, native budworm caterpillars (greater than 10 mm in length) were found feeding on canola pods that had reached 50% of their final size.

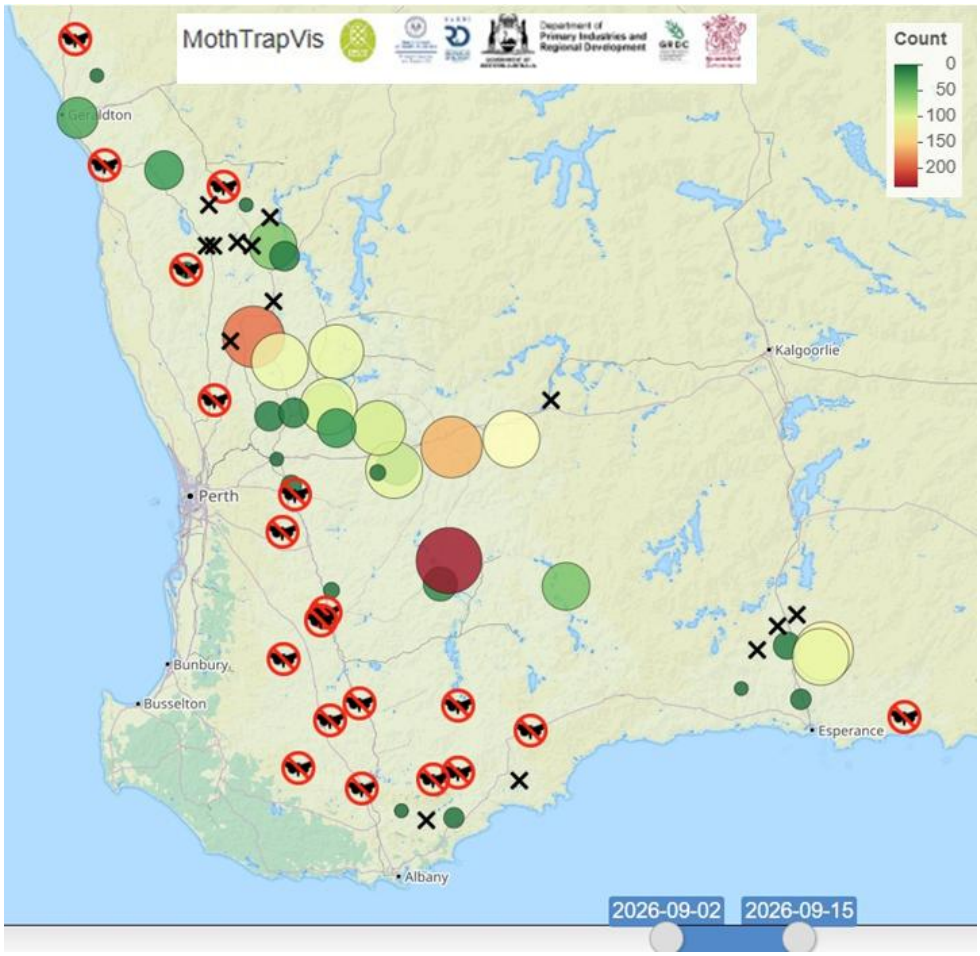
Moth trapping results

- Traps located across the grainbelt

The latest native budworm moth trap results from volunteer trappers and DPIRD staff are available to download. You can view a live map of native budworm trap results via the MothTrapVisWA page. Viewers need to select the desired trapping date range at the bottom of the map. Recent results from MothTrapVisWA are shown in figure 1 below.

The highest moth counts recorded during the past week were at Kondinin (209 moths), Merredin (156), Dowerin (98), Grass Patch (97) and Bindi Bindi (78).

No large moth flights have been detected in the south-west or along the western margin of the grainbelt.



Source: *MothTrapVisWA* Cesar Australia

Figure 1: Native budworm moth trapping results from 2 to 15 September 2026. An X indicates no data, and the red and black moth symbol indicates no moths in trap.

Management

Insecticide options for the control of native budworm caterpillars can be found in DPIRD's 2026 Winter Spring Insecticide Guide. Follow label instructions with regard to harvest withholding periods if applying insecticides.

Further information

Detailed information on this pest can be found on the department's Native budworm page.

To read about native budworm activity earlier in the season, and how to manage this pest, refer to the 2026 PestFacts WA articles in:

- Issue 17 Diamondback moth and native budworm activity update
- Issue 15 Native budworm caterpillars detected in northern cropping regions
- Issue 12 Waves of native budworm moth migration detected
- Issue 9 Early native budworm moth flights detected in northern and central regions
- Issue 7 Would you like to host a native budworm moth trap this year?

For further information on native budworm, contact Principal Research Scientist Dusty Severtson in Northam on +61 8 9690 2160 or Research Scientist Christiaan Valentine in Northam on +61 8 9690 2160.

Article author: Bec Severtson (DPIRD Northam).

Manage invertebrate contamination at harvest

- Merivale
- Jerdacuttup

A conical snail in the oat canopy (left) and a European earwig on a wheat head (right). Photos courtesy of Quenten Knight (Agronomy Focus).

As growers focus on maximising yield and grain quality, it is also important to consider the risk of insect pest contamination at harvest. Some pests cause little or no direct crop damage, but can create significant quality and receival issues if they are harvested with the grain.

Quenten Knight (Agronomy Focus) has recently observed small conical snails in heads of Koala oats near Merivale and European earwigs in heads of Scepter wheat near Jerdacuttup.

Invertebrates that are often incidentally harvested with grain include snails, Rutherglen bugs, European earwigs, beetles such as bronzed field beetles, and even caterpillars. These pests typically shelter in stubble and crop residues before climbing crop stems and grain heads as the season progresses.

When crops are windrowed, many of these invertebrates seek shelter beneath the windrows. The longer a windrow remains on the ground, the greater the number of invertebrates that may accumulate underneath it. Similarly, the closer the windrow is to the soil surface, the more likely it is that invertebrates will be inadvertently harvested.

Grain receival standards vary according to the type of invertebrate present. Monitoring crops before and during harvest can help identify contamination risks early, enabling growers to adjust harvest operations and reduce the likelihood of harvesting invertebrates with the grain.

What to look for

- Insects and other invertebrates sheltering under or in windrows, stubble and crop residues.
- Pests climbing crop stems, grain heads or pods.
- Live insects appearing in header samples, chaser bins or freshly harvested grain.

Management

Identifying contamination risks early allows growers to adjust harvest operations where necessary. Harvesting methods may need to be modified depending on the pest species present, the level of infestation and where pests are concentrated within the crop.

Options may include:

- increasing cutting height
- using a stripper front where appropriate
- adjusting header sieves
- harvesting when pest activity is lower
- avoiding heavily infested areas until conditions improve, or
- planning for grain cleaning after harvest.

Good farm biosecurity practices can help prevent insects from spreading between paddocks and properties.

Growers are also encouraged to be proactive and begin planning their pest management strategies for next year. This is an ideal time to inspect paddocks intended for canola in 2027 and assess pest numbers. Snails and European earwigs can survive hot, dry summers.

Further information

To read about earlier snail activity reported to the PestFacts WA team this season, refer to the 2026 PestFacts WA Issue 1 article Now is the time to manage snails.

For more information on snails and their management during harvest, visit:

- DPIRD's Pests slugs and snails and their management in broadacre crops factsheet
- Grains Research and Development Corporation's (GRDC's) Paddock Practices: Tips and tools for reducing snails at harvest factsheet
- Stirlings to Coast Farmers Snails R&D webpage.

For more information on European earwigs, refer to the 2026 PestFacts WA Issue 1 article European and native earwigs.

For more information on slaters, refer to the 2026 PestFacts WA Issue 2 article Slaters.

For more information on these invertebrate pests, contact Senior Research Scientist Svetlana Micic in Albany on +61 8 9892 8591.

Article authors: Cindy Webster (DPIRD Narrogin) and Svetlana Micic (DPIRD Albany).

Protecting grain from insects: ensure clean augers, field bins and silos

On farm grain silos. Photo courtesy of: Ben White (GRDC).

The Western Australian grains industry is focused on gas-tight, sealable storage and fumigation to achieve the federally mandated ‘nil tolerance’ for live insects in exports.

Residual pest populations surviving in empty storages during winter will infest new season grain when it is put into storage. If eradication of these pests is not undertaken, they may undergo selection for resistance as a result of repeated fumigations.

Gas-tight, sealable silos are the preferred system of storage, and pressure testing silos should be part of the annual maintenance program. It is much easier to replace seals and carry out repairs when silos are empty. It is recommended that inlet and outlet seals are inspected and replaced, where necessary. In addition, pressure relief oil valves should be checked and topped up with light hydraulic oil if needed.

It is good practice to pressure test sealed silos upon erection, annually, and before fumigating using a five-minute half-life pressure test. See the Grains Research and Development Corporation (GRDC) supported stored grain information hub website for more details on pressure testing.

Augers, field bins and silos should be thoroughly cleaned of grain residues and treated with a structural treatment, such as diatomaceous earth. The ground around storages should be cleared of weeds and rubbish to prevent harbouring insects. Old grain residues should be burnt or buried deep.

Growers are reminded that fenitrothion is no longer permitted for use as a structural treatment in grain storage facilities. Since 19 August 2026, all uses of fenitrothion in grain storage facilities, including hand spraying, are no longer permitted.

All agricultural chemicals should be used in accordance with the registered product label directions.

Diatomaceous earth (DE) is a useful in-silo structural treatment which can be applied with a leaf blower and venturi. DE (e.g., Dryacide) needs at least two weeks before loading grain to be effective. DE is a naturally occurring insecticide and is non-toxic, but a dust

mask and eye protection should be worn as per the label's personal protective equipment requirements.

Nitrogen can be used on its own or in combination with other fumigants for effective insect control. However, it requires a very high level of sealing on the silo, and the silo must be initially purged to maintain an environment free of oxygen.

Phosphine is the cheapest form of insect control, costing around 30 c/tonne. However, growers need to ensure that their silo is a gas-tight sealable silo and meets Australian Standards AS2628-2010.

Phosphine inhalation is very serious and can be fatal. Always read the label and safety data sheets, wear protective clothing including chemically resistant gloves and a full-face respirator with an appropriate phosphine cartridge. Inform others, for example by displaying a phosphine warning sign, when a storage facility is under fumigation.

To kill grain pests at all stages of their life cycle (egg, larvae, pupae, adult), growers should refer to the phosphine label instructions regarding dosage, treatment, ventilation and withholding times.

Poor fumigation can result in only adult and larval insects being killed, giving the mistaken impression that the fumigation was successful. However, the immature eggs and pupae will not be killed, leading to reinfestation and the development of resistant populations.

Fumigating in an unsealed silo or field bin is an off-label use. It is not only ineffective, at best killing adults and larvae, but can also contribute to the development of strong phosphine resistance on your farm.

Managing phosphine resistance

Insect populations with weak phosphine resistance have developed in all grain-growing states of Australia, largely as a result of poor fumigations. Strong resistance is widespread in the eastern states and has started to take hold in the west. To help minimise the development of strong phosphine resistance in WA, growers should use well maintained gas-tight, sealable silos.

Detecting phosphine resistant grain pests early will make eradication possible and will protect your income. To arrange a free resistance test for grain pests, contact the Department of Primary Industries and Regional Development (DPIRD) phosphine management team at phosphinemanagement@dpird.wa.gov.au.

Farmers keeping grain on farm for their own use with silos that are not sealed can use aeration as an alternative method to keep insects in low numbers.

Aeration cooling is an effective tool that can be used in combination after fumigation to help maintain control of insect populations. While aeration cooling will not kill insects, it will dramatically reduce reproduction provided aeration fans are used in combination with an aeration controller to selectively push cool dry air through the grain in the silo at a rate of 2-3 litres per second per tonne.

Further information

For more information on stored grain management, and insecticide resistance, visit;

- DPIRD's Stored grain insect resistance monitoring and management page.
- GRDC's supported website stored grain information hub
- GRDC's grain storage – Storage updates webinar video
- GRDC's hygiene and structural treatments for grain storage factsheet

For more information, contact DPIRD Senior Biosecurity Officer Ben Clarke in Perth on +61 418 387 010 or Ben White from GRDC grain storage extension team WA on 1800 WEEVIL (1800 933 845).

Authors: The original article was written by former DPIRD staff Dr Oonagh Byrne (DPIRD Perth) and Dave Cousins (DPIRD Perth), and Ben White (GRDC). This article has since been revised and updated.

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