



PestFacts WA

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Contents

- [Managing diamondback moths late in the season](#)
- [Native budworm thresholds](#)
- [Oat disease update](#)

Managing diamondback moths late in the season

DPIRD's surveillance network continues to detect high adult diamondback moth (DBM) activity across many grain-growing regions of Western Australia.

Growers are encouraged to consider treatment only when DBM caterpillar numbers exceed established economic thresholds. Late flowering canola should be monitored closely, with control thresholds of 100 or more caterpillars per 10 sweeps, increasing to 150 to 200 caterpillars per 10 sweeps at pod

Late-season spraying is generally less likely to provide an economic return than earlier intervention.

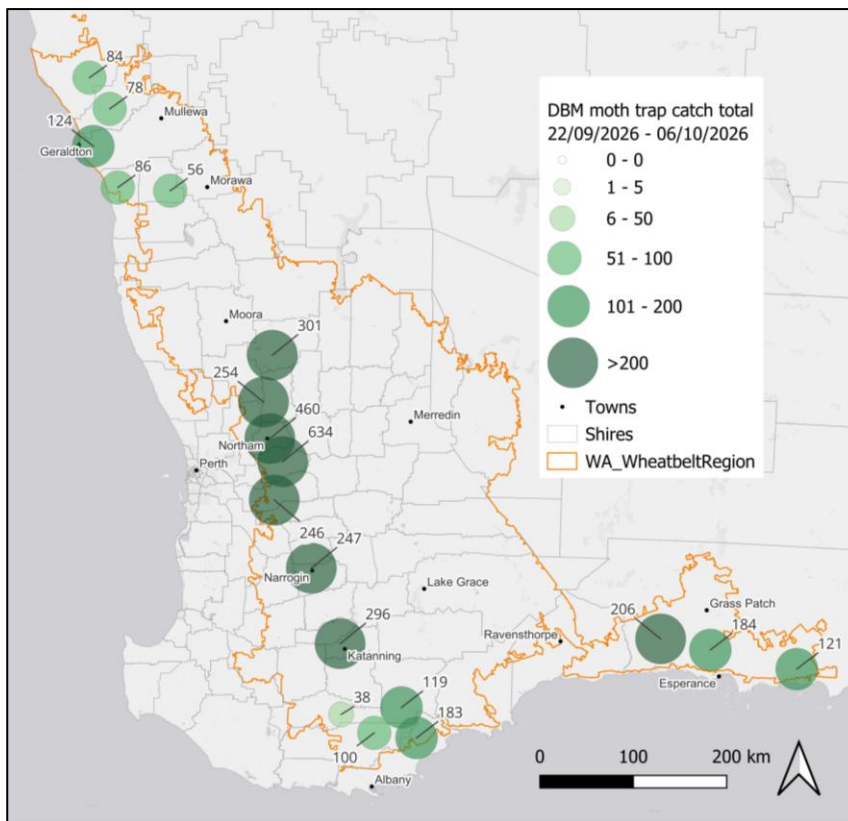


Figure 1: Total of diamondback moths captured in DPIRD traps between 22 September and 6 October 2026.

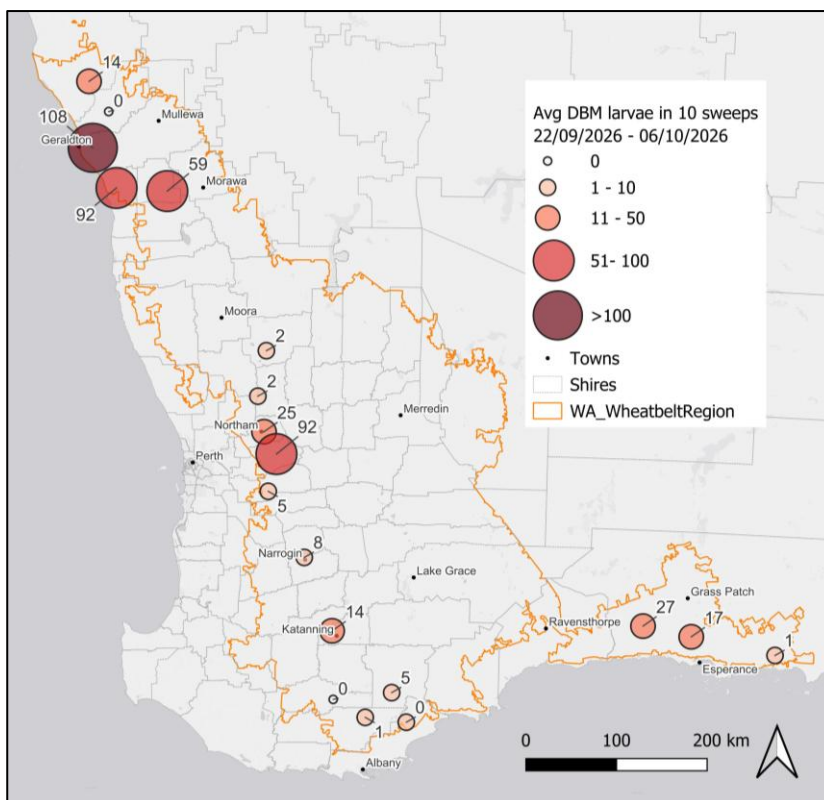


Figure 2: Average number of diamondback moth larvae sweep netted between 22 September to 6 October 2026 at DPIRD focus sites.

High numbers of DBM moths have been trapped by DPIRD's surveillance network in the central grainbelt since July and remain elevated (Figure 1). Moderate to high moth catches are also occurring in many other grain-growing regions. While moth trap catches indicate widespread adult activity, crop inspections are required to determine whether caterpillar numbers have reached economic thresholds.

Higher numbers of DBM caterpillars (more than 100 per 10 sweeps) have recently been recorded in canola near Geraldton. An average of 92 caterpillars per 10 sweeps was also recorded in canola near Yardarino and York (see Figure 2 above).

As many canola crops progress through flowering and pod development, regular sweep net monitoring remains important to determine whether caterpillar populations are likely to cause economic damage. Once canola pods have dried, they are no longer susceptible to DBM feeding damage.

Growers and agronomists finding DBM caterpillars in canola are encouraged to submit reports through the [PestFacts WA Reporter app](#) to help track pest activity across the state.

Management

DBM control thresholds at late flowering (where crops are not moisture stressed) are 100 or more caterpillars per 10 sweeps, increasing to 150 to 200 caterpillars per 10 sweeps during pod maturation.

Some other helpful tips to consider when sweep netting crops are:

- A high proportion of small caterpillars (less than 3 mm) may indicate that larval populations are still increasing.
- Regular assessments of the number of caterpillars in the crop are required because numbers can fluctuate and are just as likely to decrease as they are to increase at any stage throughout the growing season. Weather conditions, natural enemies and crop development can all influence caterpillar survival and population growth.

As canola leaves senesce, DBM larvae will migrate to green pods and feed on the outer pod surface. This feeding can cause visual surface grazing and scarring of pod walls and stems late in the season, which may result in a minor reduction of grain filling capacity depending on caterpillar numbers, soil moisture levels and the time remaining to harvest. For this reason, the threshold number of DBM caterpillars required to justify insecticide spraying increases as the crop matures.

DPIRD research trials have shown that late season insecticide application, particularly multiple sprays, are less likely to result in a profitable return than early and mid-season pest control. This is largely because DBM has less impact on yield once canola crops have finished flowering.



A diamondback moth caterpillar.

When checking crops with a sweep net be mindful that small native budworm caterpillars can easily be confused with DBM caterpillars in canola crops. DBM caterpillars are usually pale yellowish green and tapered at each end of their body, which grows to about 10mm long. They often wriggle rapidly when disturbed and will hang on a silken thread. Native budworm caterpillars are generally larger (up to 40mm) and more damaging because they feed directly on developing seeds by chewing through pods

Farmers considering late applications of insecticides must ensure label withholding periods are observed before swathing or harvest.

For more insecticide information, refer to DPIRD's [2026 Winter Spring Insecticide Guide](#).

For more advice on monitoring and managing DBM activity this season, refer to the 2026 PestFacts WA articles in:

- Issue 17 [Diamondback moth and native budworm activity update](#)
- Issue 15 [Diamondback moth activity update](#)
- Issue 13 [Monitor canola for diamondback moth caterpillars](#)
- Issue 7 [Caterpillars are active.](#)

More information

For more DBM information, refer to:

- DPIRD's [Diamondback moth and its management in canola and crop weeds factsheet](#)
- GRDC's [Diamondback moth best practice management guide - southern factsheet](#)
- GRDC's [Managing diamondback moth video](#).

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

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Article input: Christiaan Valentine (DPIRD Northam) and Dustin Severtson (DPIRD Northam).

Native budworm thresholds

Caterpillar activity

- Geraldton port zone
- Esperance port zone
- Kwinana East
- Kwinana West

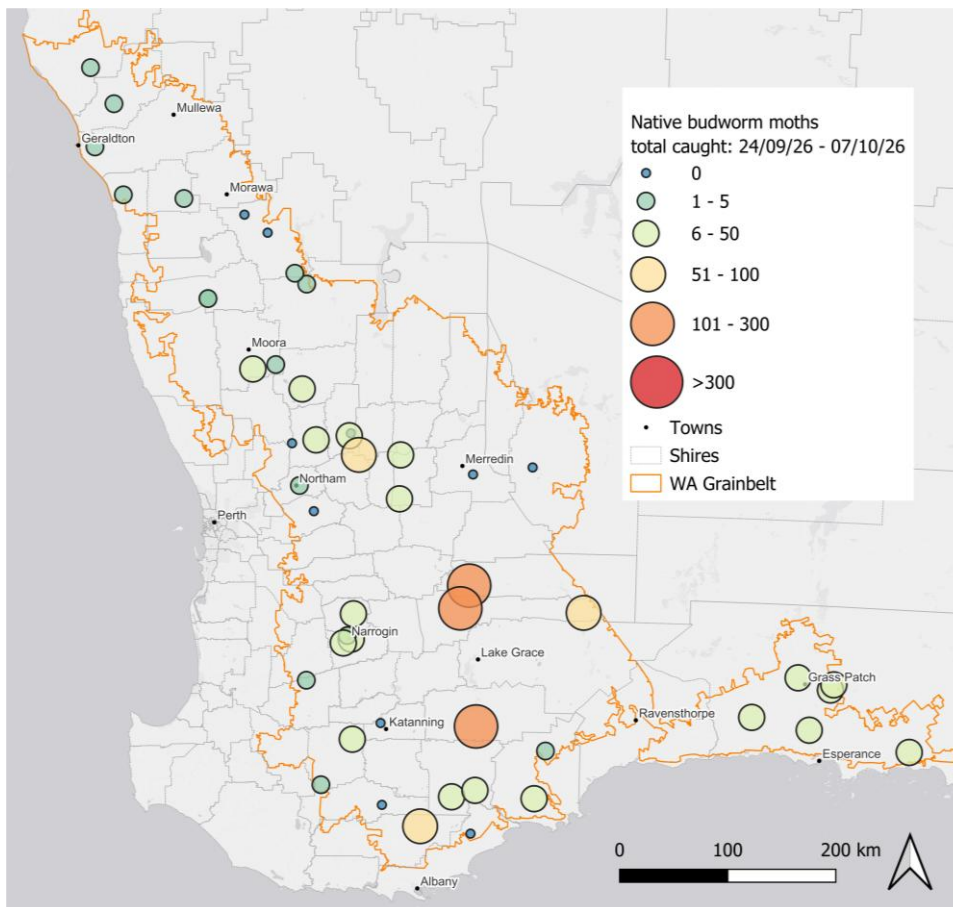


Figure 1: Native budworm moth trapping results between 24 September and 7 October 2026.

Native budworm moth numbers are decreasing in the northern grainbelt but continue to be caught in moderate numbers south of Moora. Moth catches recorded by volunteer trappers and DPIRD staff between 24 September and 7 October are shown in Figure 1. Pulse and canola crops that still have green or soft pods remain at risk of native budworm caterpillars developing from these moth populations.

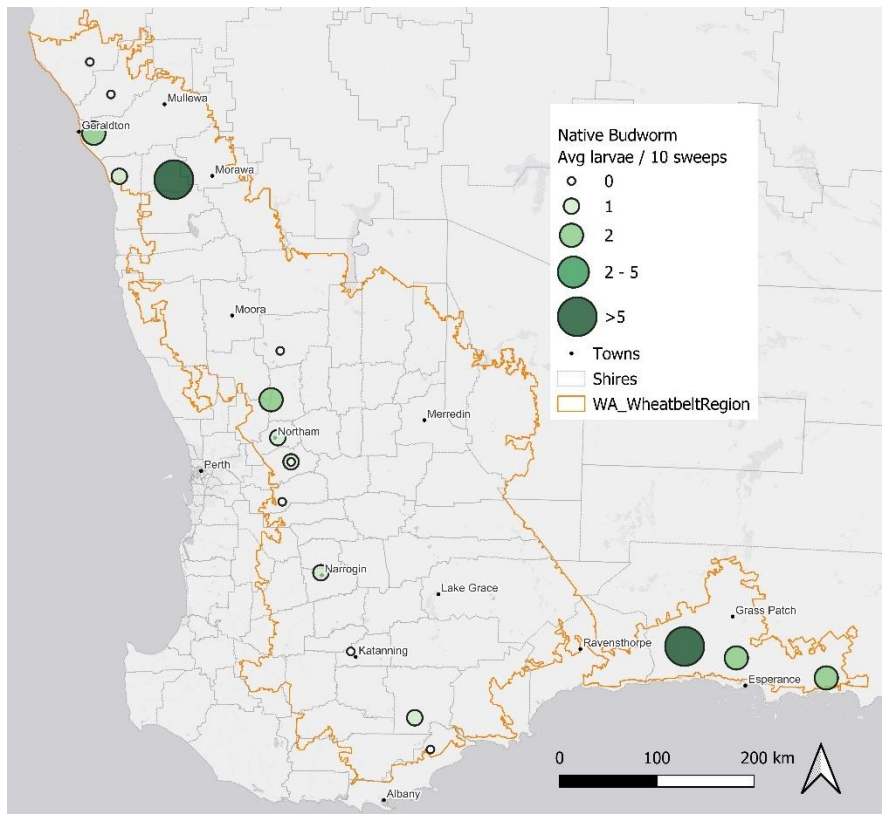


Figure 2: Native budworm caterpillars sweep net numbers from DPIRD focus sites between 24 September and 8 October 2026.

DPIRD staff regularly survey 18 canola paddocks. The latest fortnightly native budworm caterpillar results are shown in Figure 2 above. At several sites, native budworm caterpillar numbers were above threshold levels.

At Mingenew, up to 18 native budworm caterpillars per 10 sweeps were recorded. They ranged in size, with most larger than 30 mm and feeding on ripening canola pods. In the Esperance shire, 7 caterpillars per 10 sweeps were reported at Cascade, while 2 caterpillars per 10 sweeps were found at both Gibson and Howick.

In the northern region, up to 2 native budworm caterpillars per 10 sweeps were recorded at both the Yardarino and Moonyoonooka focus sites. Harvest has commenced in this area, and crops are drying out. However, crops remain at risk if native budworm caterpillars are 20 mm or more in length, as they can still feed on pods and grains.

Volunteer trappers have also reported native budworm caterpillars. At Dowerin, 1 caterpillar per 10 sweeps was recorded in lupins. At Bindi Bindi, an average of 1 caterpillar per 10 sweeps was found in canola. At Cuballing, an average of 2 caterpillars per 10 sweep was reported in faba beans, with most caterpillars approximately 5 mm in length and one measuring 20 mm.

An agronomist from Merredin reported that canola, lupins, field pea, vetch and serradella crops were sprayed for native budworm caterpillars after populations exceeded economic thresholds. They also reported finding native budworm predators, which may have helped keep caterpillar numbers at manageable levels. Agworld app users have recently reported finding native budworm caterpillars in Esperance port zone, including in canola crops at Coomalbidgup, Grass Patch and Lort River, and in field peas at Wittenoom Hills.

Economic thresholds

Growers should be aware that higher grain prices have reduced the number of native budworm caterpillars required to cause economically significant damage. Using a control cost of approximately \$20 per hectare and current indicative farm-gate grain prices, economic thresholds at pod ripening are approximately:

- Fields peas: 1 caterpillar per 10 sweeps (at \$390 per tonne grain price)
- Chickpeas: 1 caterpillar per 10 sweeps (at \$600 per tonne)
- Faba beans: 0.5 caterpillar per 10 sweeps (at \$400 per tonne)
- Lentils: 0.5 caterpillar per 10 sweeps (at \$580 per tonne)
- Canola: 4 caterpillars per 10 sweeps (at \$800 per tonne)
- Lupins: 8 caterpillars per 10 sweeps (at \$350 per tonne).

For more information on calculating the economic threshold for spraying native budworm, refer to DPIRD's [Native budworm spraying threshold factsheet](#).

When spraying maturing canola, lupins and field peas in the coming weeks should be mindful of chemical withholding periods and check chemical labels before spraying. Check the [DPIRD Winter Spring insecticide spray guide](#) for registered chemicals.

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. Moth trap results are an indicator that moth flights are still occurring, monitor later sown crops.

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 20 [Native budworm moths have migrated into the southern grainbelt](#)
- Issue 19 [Check your crops for native budworm caterpillars](#)
- 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.

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Oat disease update

As temperatures warm up, growers and consultants are encouraged to check cereal crops for diseases. At this stage of the season, as crops approach maturity, it is unlikely that management intervention will be necessary in all but the most extreme situations.

Leaf rust

- Northam
- Karlgarin
- Kondinin
- Hyden



Oat leaves with visible oat leaf rust pustules.

DPIRD plant pathologists Kylie Chambers and Jason Bradley recently found oat leaf (crown) rust in oat crops near Northam and Hyden, and in wild oats near Karlgarin and Kondinin.

Oat leaf rust (also known as crown rust) and oat stem rust can both impact the yield and quality of both hay and milling oat crops. Both rust types can affect the leaves, leaf sheaths and panicles of oat plants and can even infect the same plant.

Both oat leaf and stem rust species are oat-specific and do not infect barley or wheat.

Oat leaf rust produces round to oblong-shaped pustules, containing yellow-orange powdery spores. The pustule areas turn black with age. The pustules of oat leaf rust are lighter in colour and more velvety in appearance than those of oat stem rust and are most commonly found on the leaf surface, although can also be found on the stem and panicles of the plant. The leaf area surrounding the pustule can also turn pale green in colour.



Oat stem rust pustules.

Oat stem rust pustules are darker in colour, containing dark red-brown, powdery spores and are larger in size. These pustules can be found on stems, leaf sheathes, leaves (both sides) and sometimes on heads. The edges of stem rust pustules are frequently ruptured with appear tattered. In some cases, oat stem rust can be found exclusively on the leaves of the plant, and the area around the pustule can turn pale green (similar to that of oat leaf rust).

Stem rust thrives in warmer conditions than leaf rust and is usually detected later in the season (mid-spring). Continued monitoring of susceptible oat varieties is recommended until plants reach the early grain fill growth stage.

Management

If rust is detected in a susceptible variety (rated VS to S), fungicide is more likely to be needed to protect yield and quality. In these cases, fungicide should be applied before the epidemic becomes severe, taking into consideration the stage of crop development.

Varietal resistance for rust diseases can be independent, and a variety may be susceptible to one rust disease and resistant to the other.

Spray decisions should consider the rust species present, level of disease in the crop, varietal susceptibility, the time of the season and growth stage of the crop. Additionally, consider the likelihood of ongoing rainfall after spraying, as this is favourable for disease development. It is important to correctly identify the type of oat rust in the paddock, as this will impact fungicide choice and application rate.

Use high rates of fungicide for longer duration of protection, for example, when seasonal conditions favouring infection are likely to persist, or for more susceptible varieties. Cost should be aligned to crop yield potential and crop season length.

If growing oats for hay, it is important to consider fungicide withholding periods and the predicted time until cutting when determining whether to apply fungicide and selecting an appropriate fungicide option. While some fungicides have been shown to have an off-target effect on weather-induced fungal staining (also known as saprophyte damage), fungicides should only be applied for in-season disease management only.

Export hay growers should also be aware that compliance to Australian label requirements goes not guarantee compliance with maximum residue limits (MRLs) for export markets, which may have stricter standards. If you are unsure about residue requirements for intended export markets, please contact your relevant fodder exporter.

In milling oat, spraying after crop flowering is normally not economical for leaf rust. However, stem rust is more detrimental to yield loss than leaf rust, is favoured by warmer temperatures and may need prompt spraying in susceptible varieties even into grain filling. As the season progresses and warmer, drier conditions occur, the likelihood of an economic response to fungicide will diminish but less so, for stem rust.

For a list of registered fungicides to use as foliar sprays, visit DPIRD's [Fungicides](#) page. Always follow fungicide label recommendations for application rates and withholding periods.

Rusts require a green bridge to survive. Green bridge management including grazing or herbicide application to remove oat regrowth or wild oats, prior to sowing can help reduce inoculum carry over between seasons

For more information on oat leaf rust and oat stem rust, refer to DPIRD's [Leaf diseases and their management in oats](#) page and the DPIRD and AgriFutures [Oat stem and leaf \(crown\) rust management guide](#).

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. This is a free testing service that identifies new rust strains. This information will assist cereal breeders in developing new resistant varieties as new strains could become problematic in existing varieties. Infected leaf samples should be mailed in paper envelopes (do not use plastic wrapping or plastic lined packages) along with your details and collection information (location, variety etc.) directly to The University of Sydney, Australian Rust Survey, Reply Paid 88076, Narellan NSW 2567. Optional free reply-paid envelopes can be ordered from University of Sydney. For further details refer to the University of Sydney's [Australian Cereal Rust Survey](#) page.

Septoria avenae blotch grain staining

- Moonyoonooka
- Northam
- Dale



An oat glume with septoria avenae blotch symptoms.

Septoria avenae blotch has been found on the glumes of oat plants (var. Bannister) in Northam. Grain staining was also visible underneath the glume. Earlier in the season DPIRD staff reported finding septoria avenae blotch in oats near Moonyoonooka and Dale.

Septoria avenae blotch is the most prevalent oat disease in Western Australia. Susceptible oat varieties can experience reduced grain yield and quality, including lower average grain weight and increased screenings. In high disease pressure environments or rainfall between grainfill and harvest can result in grain staining of susceptible varieties such as Bannister, potentially resulting in downgraded grain at receival.

Foliar septoria symptoms can appear as brown to purple oval shaped spots on leaves. These lesions then develop into larger brown blotches up to 2 cm in size, which can coalesce to cover most of the leaf. Severe infections can lead to plant lodging. The florets and glumes of plants can also develop blotches, which can cause black staining of seed (also known as septoria grain staining) in some varieties. Grain staining is mostly an issue in susceptible oat varieties such as Bannister.

Management

The most effective approach to manage the impact of *Septoria avenae* blotch and prevent grain staining, is to grow more resistant oat varieties. However, the variety Bannister is more susceptible to grain staining compared to other varieties such as Williams and Carrolup despite having either the same (Williams) or better (Carrolup) septoria resistance rating.

In high disease pressure scenarios, such as continuous oat crops, growing susceptible or very susceptible varieties, and in favourable environments (such as higher rainfall regions) where disease develops into the upper canopy, yield and grain quality losses can occur. In these circumstances, foliar fungicides can reduce disease severity and reduce potential losses to disease.

Previous trial work conducted by ConsultAg and DPIRD determined that a foliar fungicide at or around flag leaf emergence was the most effective in controlling disease under lower disease pressure situations, or when Septoria develops later in the season. In high disease pressure situations, a two-spray approach (at stem elongation and flag emergence/booting) is recommended if growing susceptible varieties such as Bannister. Managing the disease in season also reduces the risk of grain yield and quality impacts.

Late season fungicide applications on emerged heads (applied at Z55-59) can reduce, but not eliminate, septoria grain staining. Applications at later growth stages are increasingly less likely to be economically viable.

At this stage of the season, with warmer, drier conditions and crops approaching maturity, the likelihood of an economic response to fungicide is unlikely in most situations.

For a list of registered fungicides to use as foliar sprays for managing Septoria in oats, refer to DPIRD's [Fungicides](#) page. Always adhere to fungicide label recommendations, including application rates and withholding periods.

For more information on Septoria avenae blotch, refer to DPIRD's [Septoria avenae blotch and its management in oats](#) factsheet and the DPIRD and AgriFutures [Septoria avenae blotch disease management guide](#).

Red leather leaf samples wanted



Red leather leaf on oats.

Red leather leaf (RLL) is a foliar disease caused by the fungus *Neospermospora avenae*. Symptoms include distinct lesions on leaves, featuring a lighter centre (white/grey/blue) with dark margin (red/brown). Over time, these develop into red, irregular shaped lesions that spread across the leaves. As affected leaves age, they take on a leathery appearance and a red-brown colour. Symptoms of other diseases or abiotic stresses can easily be mistaken for or confused with RLL symptoms.

If you have any oat leaf samples that you suspect may have RLL, please contact Department of Primary Industries and Regional Development (DPIRD) Senior Research Scientist [Kylie Chambers](#) on +61 8 9690 2151.

Crop rotation, along with sowing uninfected (clean) seed, is the primary management approach for RLL.

Selecting moderately susceptible or better oat varieties is another option. Disease resistance assessments for RLL are not currently conducted in WA. For RLL disease ratings please refer to the Grains Research and Development Corporation (GRDC) [National Variety Trials \(NVT\) online disease ratings](#).

Applying a registered foliar fungicide, particularly at early plant growth stages and during early infection, can also reduce the incidence and impact of this disease. For more information on registered fungicides and application timings please, refer to DPIRD's [Fungicides](#) page and the product label.

More information

To check your oat variety susceptibility ratings to these diseases, refer to DPIRD's [2026 WA Crop Sowing Guide](#).

To read about earlier oat disease activity, refer to the 2026 PestFacts WA Issue 11 article [Oat diseases](#).

For more information on oat diseases, refer to:

- DPIRD's [Leaf diseases and their management in oats](#) factsheet
- AgriFutures Australia's [Red leather leaf of hay oats disease management guide](#)
- Agriculture Victoria's [Red leather leaf of oats](#) page.

For more information, contact Senior Research Scientist [Kylie Chambers](#) in Northam on +61 8 9690 2151 or Principal Research Scientist [Geoff Thomas](#) in Perth on +61 428 947 287.

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