



PestFacts WA

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Contents

- [Phomopsis on lupins: risks to grazing livestock](#)
- [Fusarium crown rot detected in wheat and barley](#)
- [Late season native budworm update and monitoring program concludes](#)
- [Common marauding katydids and grasshoppers](#)

Phomopsis on lupins: risks to grazing livestock

- Ogilvie
- Mount Horner
- Morawa



Phomopsis lesions on lupin pods.

Phomopsis lesions were recently found by Department of Primary Industries and Regional Development (DPIRD) staff on lupin pods and/or stems in lupin crops near Morawa and Mount Horner, and a lupin national variety trial (NVT) near Ogilvie.

Symptoms and impact

Phomopsis stem and pod blight, caused by the fungus *Diaporthe toxica*, occasionally reduces lupin yields. However, its major impact is the production of a mycotoxin (phomopsin) in mature or senesced lupin stems and seeds. These toxins can cause lupinosis, a potentially fatal liver disease in livestock – especially sheep – when they graze on infected stubble or consume infected seed.



Phomopsis infected narrow leafed lupin pod and seed.

Pod infection from phomopsis appears as dark lesions that may cover part or all of the pod surface. These lesions can lead to fungal growth inside the pod, resulting in seed infection. Infected seeds often appear shrivelled or discoloured (light to golden brown), and their cotyledons remain green instead of turning yellow. Infection risk increases during periods of heavy rainfall while pods and seeds are maturing.

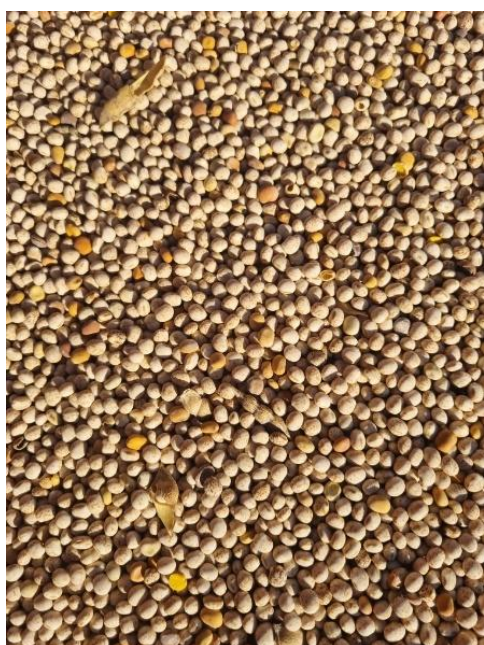


Phomopsis lesions on a lupin stem.

Phomopsis stem lesions are usually hidden in green lupin plants. The fungus infects early but stays dormant until the plant begins to dry. Rain or moisture on senescing stems triggers fungus growth, producing black fruiting bodies on stubble. Chemical desiccation or moisture stress can speed up symptom development. With the cool damp weather over the last few weeks, growers should look for black fruiting bodies – which feel rough like sandpaper – on stems to confirm stem phomopsis before grazing.

All lupin varieties are susceptible to some level of phomopsis infection. However, the varieties Coyote, Jenabillup and Quilinoch are more vulnerable to stem infection, increasing the risk of lupinosis in grazing livestock, especially after summer rainfall. Mandelup and Quilinoch also show higher susceptibility to pod and seed infection. For the latest phomopsis resistance ratings, refer to DPIRD's 2026 WA Crop Sowing Guide.

Livestock grazing



Harvested lupin seed sample containing orange-yellow coloured seed coat infected with Phomopsis. Photo courtesy of Anonymous grower.

The phomopsis toxins can cause sickness or death (lupinosis) in livestock. This most commonly occurs when they graze on infected lupin stems or stubbles, but it can also result from the feeding of infected seed. Infected seeds are usually discoloured, ranging from golden to a dark purple-brown colour.

Producers should closely monitor stock grazing lupin crops, stubbles or baled lupin straw, particularly following rainfall events. Early signs of lupinosis include lethargy, reduced appetite and hollow flanks. Monitoring of lupin stems or seed is also important, if phomopsis infection is evident in lupin stems, pods or seed, producers should carefully assess grazing risk and consider removing stock from affected paddocks. Further grazing management recommendations are available on the DPIRD's Lupinosis webpage.

If you notice unusual signs of disease in your livestock, call your private veterinarian or DPIRD field veterinary officer, or the Emergency Animal Disease hotline on 1800 675 888.

Further information

For more information on phomopsis, refer to DPIRD's Foliar diseases and their management in lupins factsheet.

For more information on lupin diseases, contact Senior Research Scientist Ciara Beard in Geraldton on +61 8 9956 8504 or Principal Research Scientist Geoff Thomas in Perth on +61 428 947 287.

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Fusarium crown rot detected in wheat and barley

- Merredin
- Narembreen
- Lake Grace
- Cascade
- Munglinup
- Gibson



Fusarium crown rot in wheat.

DPIRD Plant pathologists have recently reported Fusarium crown rot (FCR) in wheat near Merredin, Narembreen, Lake Grace, Cascade and Gibson, and in barley near Munglinup.

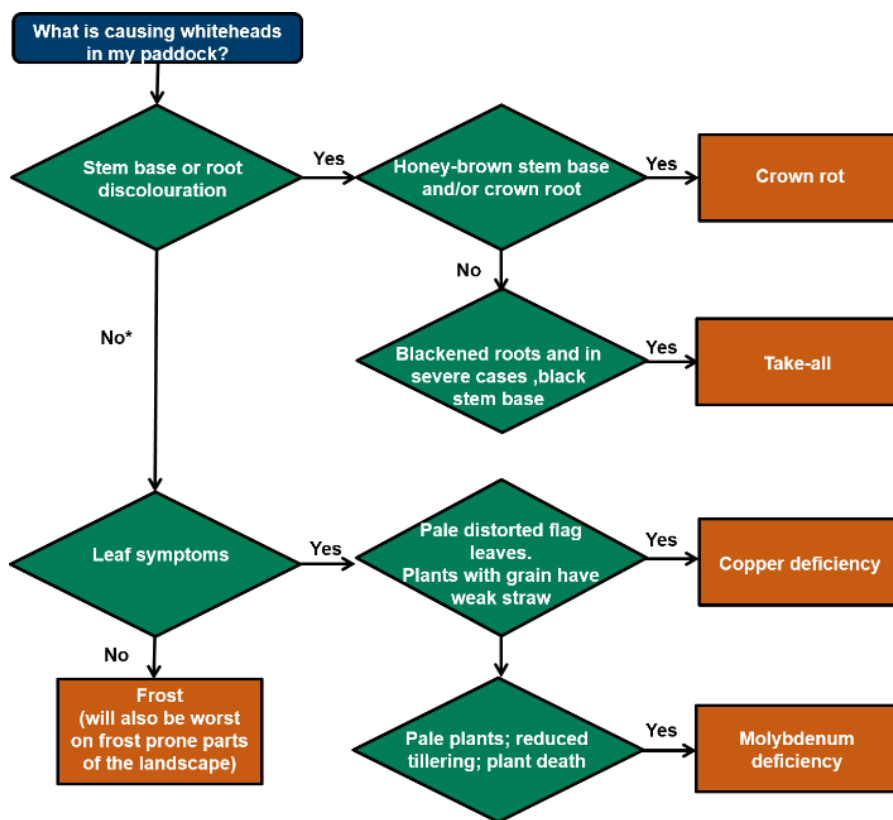
FCR is a stubble-borne disease of winter cereals, particularly wheat and barley, caused predominantly by *Fusarium pseudograminearum* in Western Australia. The fungus can infect cereal crops and susceptible grass hosts, surviving for several years in infected plant residues. These residues provide a source of inoculum for subsequent crops, with infection occurring primarily at the stem base when plants come into contact with infected residue.



A classic symptom of Fusarium crown rot is the honey-brown discolouration of stem bases, which are most visible when the outer leaf sheaths are carefully pulled back.

The bumper crops of 2024 and 2025 may have increased the amount of cereal stubble in some paddocks, potentially increasing the risk of FCR in 2026 where infected residue is present. The risk of yield loss is greatest when infected plants experience moisture stress during grain filling, particularly in lower-rainfall areas such as the eastern grainbelt. Under these conditions, infected tillers may hay off prematurely and develop whiteheads, in which grains fail to fill or are poorly developed. However, whiteheads may be absent when moisture is adequate, even in infected crops.

Whiteheads are not specific to FCR and can result from several diseases or non-disease factors. Other diseases, such as take-all, can also cause whiteheads, while frost, drought-related moisture stress, and copper or molybdenum deficiency can produce similar symptoms. Distinguishing between these causes is important for accurate diagnosis and management. FCR is characterised by honey-brown discolouration at the stem base and/or crown, visible after removing the leaf sheaths. Pink or salmon-coloured fungal growth may also be visible on infected stem tissue under favourable moisture and humidity conditions. Take-all causes blackened roots and, in severe cases, a blackened stem base. In contrast, frost, drought-related moisture stress and nutrient deficiencies do not produce the characteristic honey-brown discolouration associated with FCR, although frost can occasionally cause stem discolouration higher up the plant. The flow chart below provides further guidance on distinguishing these causes of whiteheads (Figure 1).



*Note: Frost can cause stem discolouration as well but unlike crown rot or take-all does not originate at the stem base. Often a stem frost will result white-brown discolouring on the stem between the head and above the node (peduncle). See [frost ID guide](#) for more information. (© DPIRD).

Figure 1: Flow chart for identifying some of the main causes of whiteheads.

To assess FCR, collect representative plants at random along a large W-shaped transect across the paddock. Include plants both with and without whiteheads, as selecting only symptomatic plants may lead to an inaccurate assessment of disease incidence. Remove the leaf sheaths and inspect the stem bases for characteristic discolouration.

For further guidance on sampling and disease assessment, refer to the Grains Research and Development Corporation's (GRDC's) [Crown rot – Western](#) fact sheet.

Management

The lead-up to harvest is an important time to monitor crops and identify FCR to help guide management decisions for next season.

Crop rotation to non-cereal crops, combined with effective grass weed control, is the key management strategy for affected paddocks. There are currently no registered in-crop fungicides for the control of FCR. As a result, paddock management decisions based on this season's observations will be critical to next year's cropping program.

If a paddock with a high level of FCR inoculum is to be sown to cereals, growers should select barley or wheat varieties that are less likely to suffer yield loss from the disease. Information on varietal yield responses is available in DPIRD's [2026 WA Crop Sowing Guide](#).

Seed dressings, used in combination with other management practices, can help minimise initial infections. The fungicide seed treatments Ipconazole + metalaxyl-M, difenoconazole + metalaxyl-M + sedaxane, and penflufen + prothioconazole + metalaxyl, which are registered for the suppression of FCR, can inconsistently reduce the extent of yield loss from this disease. The new active, cyclobutrifluram, registered for FCR control, appears to have more consistent and stronger activity in limiting FCR yield loss. For more information, refer to this GRDC paper [Fusarium crown rot seed fungicides: independent field evaluation 2018-2021](#).

Fungicide seed treatments should not be considered standalone control options for FCR. For more fungicide information, refer to GRDC's [Crown rot – Western](#) fact sheet and DPIRD's [Fungicides](#) page.

Growers observing whiteheads or areas of patchy, poor crop growth in barley or wheat paddocks are encouraged to check for FCR and confirm suspected infections. Plant samples can be collected now, or soil samples with added stubble can be taken after harvest. Plant samples can be dispatched to the [DPIRD Diagnostic Laboratory Services – Plant pathology lab](#) to confirm which soilborne diseases are present.

The [PREDICTA® B](#) soil test can detect the FCR fungus in soil samples containing stubble, provided sampling follows the PREDICTA B protocol. The test can also identify several other soilborne pathogens, including take-all, Rhizoctonia bare-patch and some parasitic nematodes.

Free Fusarium crown rot stubble testing available

DPIRD WA is encouraging growers and agronomists to submit cereal stubble samples for free disease testing as part of the GRDC-funded national Soilborne Disease Initiative (SBDI). Testing includes laboratory assessment for Fusarium crown rot (FCR) and common root rot (*Bipolaris* spp.), along with a visual assessment for take-all.

Why test your stubble?

Knowing which diseases are present in your paddocks can help you better understand disease risk and make informed decisions about crop rotations, variety selection and disease management for the 2027 season and beyond.

Growers will receive a free, one-page report for each sample, providing results that can help compare disease levels between paddocks.

How to collect and submit samples

- After harvest, collect at least 60 primary tillers per paddock, taking 12 tillers from each of five locations in a W-shaped sampling pattern.
- Place the stubble in a brown paper bag with a completed paddock information sheet. To request a paddock information sheet, email DPIRD Research Scientist [Ahmed Saad](#).
- Ensure samples are dry. If necessary, air-dry them for 2–3 days before packaging.
- Store in a cool, dry place. Do not refrigerate.

Send samples to:

Ahmed Saad
DPIRD
14 Monash Gate
Jandakot WA 6164

Alternatively, samples can be dropped off at your nearest DPIRD office.

Take advantage of this free testing opportunity after harvest to better understand the soilborne disease risks in your paddocks and help plan for 2027.

Further information

For more details on FCR, refer to GRDC's Crown rot – Western fact sheet and DPIRD's Soil Quality: 5 Soil Biology e-book.

Growers should also refer to the Soil Quality's Take-all disease factsheet, as take-all can sometimes be confused with FCR.

For more information, contact Principal Research Scientist Daniel Hüberli in Perth on +61 427 426 522, Senior Research Scientist Kylie Chambers in Northam on +61 8 9690 2151, or Research Scientist Ahmed Saad in Perth on +61 477 150 079.

Article authors: Cindy Webster (DPIRD Narrogin), Daniel Huberli (DPIRD Perth), Ahmed Saad (DPIRD Perth), and Kylie Chambers (DPIRD Northam).

Late season native budworm update and monitoring program concludes



A native budworm moth.

As harvest gets underway across much of the WA grainbelt, the risk from native budworm is declining. Most pheromone moth traps have now been removed from crops, and any moth flights occurring now are unlikely to cause economic damage because the resulting caterpillars will not have enough time to develop before crops are harvested.

Continue checking later maturing crops for caterpillars

Surveillance at DPIRDs monitored canola sites has detected low numbers of native budworm caterpillars in later maturing crops at York, Narrogin and Katanning. The levels are below spray thresholds, indicating that control measures are not required.

Growers with later maturing pulse, oilseed and pasture seed crops should continue to check crops that have not recently been sprayed, particularly in areas where moderate moth flights were recorded 2 to 3 weeks ago, including Kulin, Kondinin, Varley and Pingrup (Figure 1). Any eggs laid by those moths could result in caterpillars large enough to potentially damage susceptible crops.

Recently updated economic thresholds can be found in the 2026 PestFacts WA Issue 21 article [Native budworm thresholds](#). If a late insecticide application is required, it is important to check chemical withholding periods (WHP), as minimum times required between the spray application date and harvesting or windrowing crops can vary depending on the product.

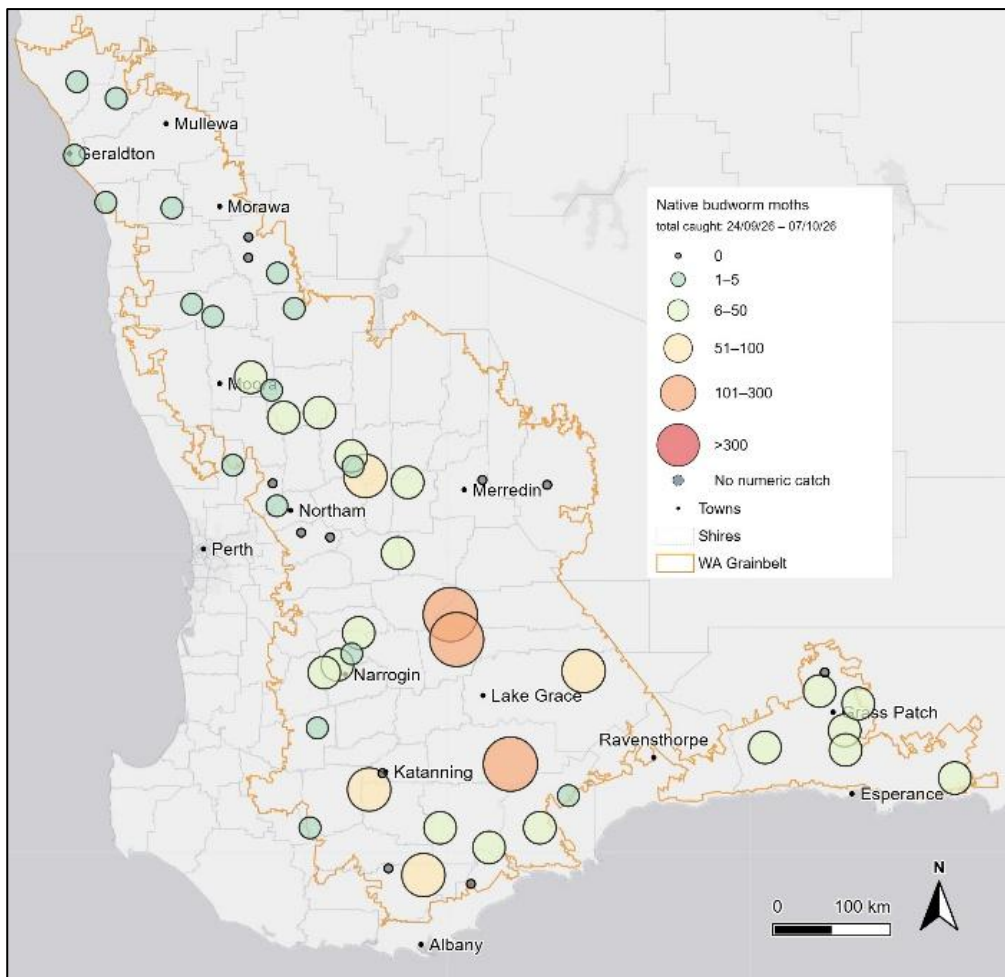


Figure 1. Native budworm moth trap catches from 24 September to 6 October 2026.

Moth catches during October have been very low across the grainbelt (Figure 2). With many crops now being desiccated or harvested, the risk of native budworm caterpillar damage is low. This season differs markedly from 2024 and 2025, when large moth migrations were recorded in early October and increased the caterpillar damage risk to later maturing crops.

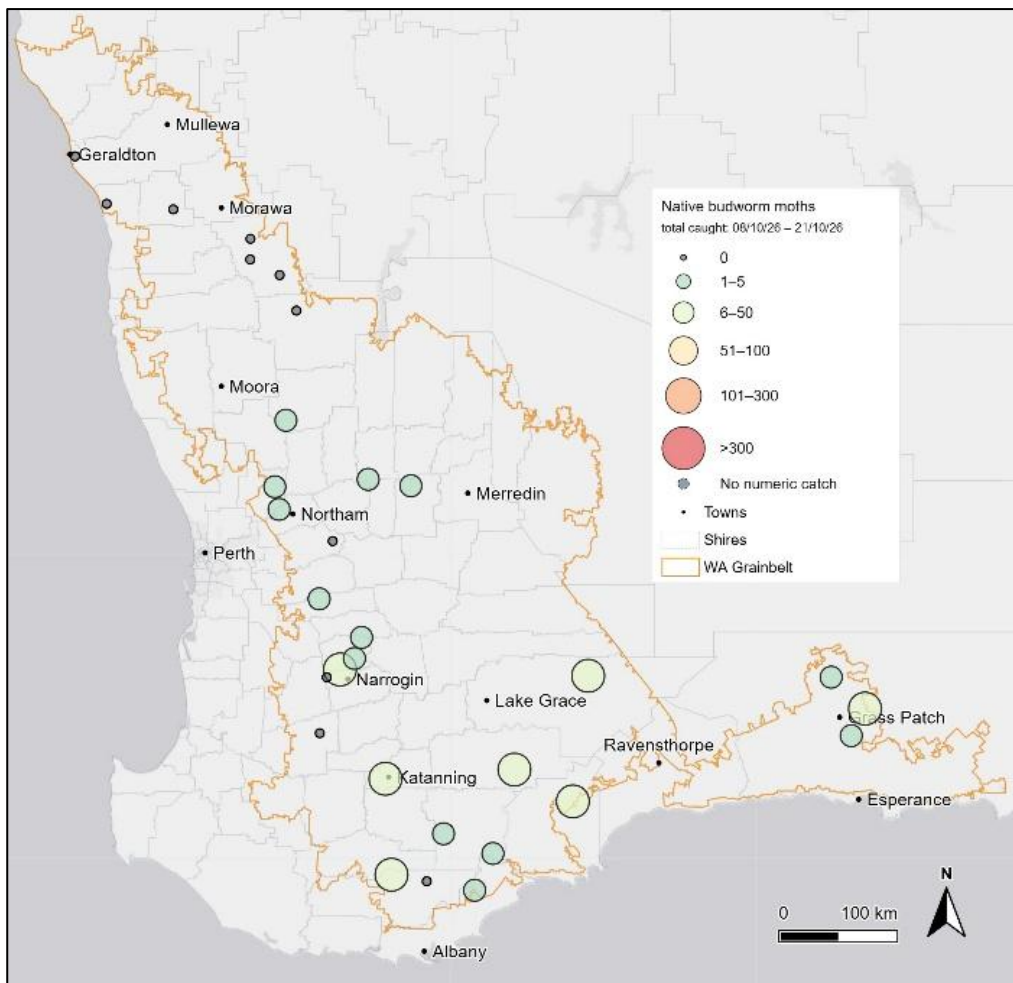


Figure 2. Native budworm moth trap catches from 7 to 21 October 2026.

Thank you to volunteer moth trap operators

The success of WA's native budworm monitoring program relies heavily on the contribution of volunteer moth trappers across the grainbelt. In 2026, volunteers monitored 50 pheromone traps stretching from Geraldton to Esperance, providing valuable information that helped growers and agronomists assess seasonal risk.

Some participants have supported the program for decades, while others joined for the first time this year. Their weekly moth counts helped fill surveillance gaps, improve regional forecasting and ensure growers could target crop inspections when caterpillar activity was most likely.

DPIRD's native budworm moth monitoring program will recommence in July 2027.

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 the moth trapping program, refer to the 2026 PestFacts WA articles in:

- Issue 21 [Native budworm thresholds](#)
- 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, 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).

Common marauding katydid and grasshoppers

Growers are encouraged to correctly identify katydids, grasshoppers and locusts, as different species vary in their feeding behaviour and potential to cause crop damage. A free diagnosis can be requested using the [PestFacts WA Reporter app](#).

Common marauding katydid

- Walkaway
- Mingenew



A Common Marauding Katydid. Photo courtesy of Peter Elliot-Lockhart (Elders).

Peter Elliot-Lockhart (Elders) has reported finding common marauding katydids, *Metaballus frontalis* (Orthoptera: Tettigoniidae), in canola and lupin crops near Walkaway and Mingenew.

Peter also observed minor feeding damage on the surface of pods, however, the damage was more likely caused by caterpillars rather than the katydids themselves.



Chewing damage on canola pods. Photo courtesy of Peter Elliot-Lockhart (Elders).

Biology and identification

The common marauding katydid is widespread throughout Western Australia and is typically active during the day. Unlike grasshoppers, this species is predatory, feeding mainly on small insects. It may occasionally feed on flowers and grasses but is not regarded as an economic crop pest. High numbers can be present from October to December.

Common marauding katydids can be distinguished from grasshoppers and locusts by their long antennae which extend beyond the end of the abdomen. Adults are typically about 3 cm long and green in colour, although orange-brown and yellow colour forms occasionally occur. Females have a prominent 3 cm ovipositor, giving them a total length of more than 6 cm. They are also characterised by a distinctive shield-like plate (pronotum) behind the head, a feature typical of shield-backed katydids.

Grasshoppers

- Doodlakine



A native grasshopper (Urnisa guttulosa).

The PestFacts WA team has received a report of grasshopper activity at Doodlakine.

Many native grasshoppers do not swarm, although they can occur in high numbers at this time of year. These species tend to feed on grasses. Control is usually not economical because native grasshoppers do not form the dense bands characteristic of Australian plague locust (APL) and are usually dispersed over wide areas, resulting in only localised feeding damage.

The risk from grasshoppers is greatest during crop establishment, particularly following a wet summer that allows grasshopper populations to build up. As crops senesce, grasshoppers often move onto roadside grasses, where they are more easily seen.

If control measures are being considered, correct species identification is important because management options can differ from those recommended for APL.

Further information

For more information about grasshoppers and APL, and earlier activity this season, refer to 2026 PestFacts WA Issues 4 article [Australian plague locusts are active](#) and Issue 19 article [Australian plague locust spring hatchings have started](#).

Further 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.

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