Department of Primary Industries and Regional Development
GOVERNMENT OF WESTERN AUSTRALIA
Protect Grow Innovate

PestFacts WA

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Now is the time to patch bait snails

- Wellstead
- Gibson
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Image 1: Conical snail feeding on a canola seedling. Photo courtesy of: DPIRD.

Dissections of small conical snails are being undertaken by DPIRD staff, agronomists, farmers and grower groups between February and May for a project led by the Stirlings to Coast Farmers (SCF) grower group in collaboration with the South East Premium Wheat Growers Association (SEPWA) and DPIRD. The Grains Research and Development Corporation (GRDC) is funding the initiative as part of its Snails Surveillance for the South Coast baiting program.

So far, snails dissected in Esperance had no green plant material in the stomach whereas snails dissected near Wellstead showed evidence of actively feeding.

During dissections in April of small conical snails collected near Gibson, Research scientist Andrea Hills (DPIRD) found green plant material in the snails' stomachs. This indicates that snails in this area are actively feeding.

Dissections of snail albumen glands by DPIRD staff in April have also revealed that the albumen gland in snails at Gibson is increasing in size. The albumen gland in snails supplies the nutritive fluid required for egg production. For snails to be reproductive, the albumen gland needs to be developed. Monitoring the increase in albumen glands size indicates when snails will start laying eggs.

SCF has been coordinating dissections and to date, albumen glands in Esperance port zone are increasing in size, whereas in Albany snail glands are still very small. Snails in Esperance are not reproductive and laying eggs. As soon as there is widespread rainfall and glands become 4 mm or larger egg lay is expected to have occurred.

More dissection results can be viewed at the SCF's South Coast Snails Monitoring portal.

Snail movement is being monitored by SCF and SEPWA as part of a project led by the South Australian Research and Development Institute (SARDI) and is an investment of GRDC. With recent rainfall, snails have been observed actively moving under the cameras.

Timing of baiting is important, to coincide with when snails are actively moving and feeding. Before baiting entire paddocks, patch bait to make sure snails are actively feeding. Baiting before egg lay occurs will decrease the following years population.

Biology & management of broadacre snails

There are 3 snail species that are pests of WA broadacre crops. For more information on how to diagnose snails refer to DPIRD's Pests slugs and snails and their management in broadacre crops factsheet.

Eggs laid by snails this season will contribute to snail numbers next year.

Snail numbers should be monitored to determine if they exceed DPIRD's suggested threshold numbers and if there is a need to carry out management methods.

Snails are usually found on stumps, fencelines and under stubbles, depending on the species of snail. Camera monitoring has shown that the best time to check is early in the morning, from 6am to 8am, when there is moisture on plants and stubble.

A good way to determine snail numbers on open ground is to use a 32x32cm square quadrant and count all of the live snails in it. This is an area of 10% of a square metre so multiplying by 10 will give an estimate of snails per square metre.

Trials conducted by Stirlings to Coast farmers has shown small conical snails are difficult to control with techniques such as cabling, speed tilling and stubble crunching that control round snails (white Italian, vineyard snail) are not effective on small conical snails. For more information refer to the Stirlings to Coast Farmers Trials Review Booklet 2020.

After sowing, baiting is the only control method for snails. Baiting before the crop emerges is more effective as snails randomly encounter baits. The less green plant material is present in the paddock the more likely it is that snails will encounter a bait.

Timing of baiting is important, to coincide with when snails are actively moving and feeding.

Snails can become active after a rain event of 5 mm or more. Snails can also be actively moving, even if there has not been rainfall during the day, as long as humidity is above 75%.

It is advised that growers patch bait sections of paddocks to make sure snails are actively feeding before baiting entire paddocks. An even spread of baits across paddocks increases the chance that snails will feed on them, reducing the need for re-baiting. If unsure that snails are actively feeding, consider baiting small patches and observe for any dead snails the day after.

It is also recommended that growers' budget for more than one bait application. As a single application of baits may not be sufficient to control small conical snails. For more baiting information refer to the Stirlings to Coast Farmers Effective baiting options for the control of conical snails in the Albany port zone final technical report.

Research has also found that applying granular lime to a paddock with small conical snails increases shell strength and increase their fertility. Growers need to budget for baiting paddocks after liming has occurred. For more information see the GRDC Update Paper Determining the effect of lime on small pointed (conical) snail fecundity and shell strength.

A biocontrol program has commenced on the South Coast, where Australian-bred parasitoid flies (Sarcophaga villeneuveana) have been released to help control snail pests and protect crop yields, quality and growers' profitability. For more information refer to DPIRD's Fly biocontrol released to control farm snail pests media release.

Further information

For more information on slug and snail control visit:

- DPIRD's Pests slugs and snails and their management in broadacre crops factsheet.
- DPIRD's Managing snails in WA webinar recording
- DPIRD's Managing snails in broadacre crops podcast
- GRDC's Nail the Snails publication
- GRDC's Snail baiting as part of an integrated pest management strategy video.

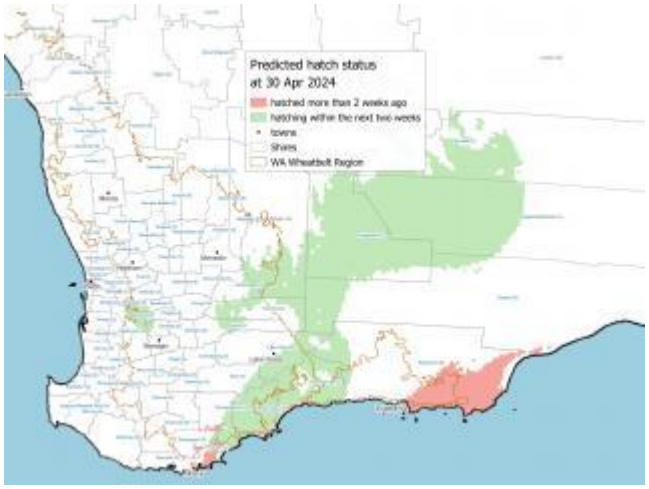
For more information contact Research Scientist Svetlana Micic, Albany on +61 (0)8 9892 8591.

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

Article input: Lizzie von Perger (SCF), Andrea Carmody (SEPWA) and Michelle Handley (SEPWA).

Redlegged earth mites are hatching

- West River



Redlegged earth mite (RLEM) predicted egg hatch status for WA, current to 30 April 2024. Map courtesy of: RLEM hatch tool (Cesar Australia) and Christiaan Valentine (DPIRD).

This week an agronomist has reported seeing redlegged earth mites (RLEM) in a seedling canola crop at West River.

Growers are urged to monitor for RLEM activity in their paddocks and be wary of insecticide resistant populations.

Cesar Australia's online RLEM egg hatch calculator has predicted hatching to occur within the first 2 weeks of May at Albany, Gnowangerup, Jerramungup, Ravensthorpe, Lake Grace, Wandering, and parts of the Great Southern Region. Early April hatching was predicted for areas east of Esperance and east of Albany.

RLEM insecticide resistance

Resistant RLEM populations are likely to be present in paddocks that have a history of repeated insecticide applications.

Growers and consultants are urged to apply integrated pest management (IPM) strategies when managing RLEM. These strategies include; identifying mites, rotating different chemical groups and reserving co-formulations or chemical mixtures only for situations where damaging levels of RLEM and other insect pests are present.

Consider applying insecticides that are pest specific when spraying for pests other than RLEM.

For more IPM information see DPIRD's Prevent redlegged earth mite resistance page and GRDC's Resistance management strategy for the redlegged earth mite in Australian grains and pastures fact sheet.

You can also listen to the DPIRD Grains Convo podcast Why aren't your insecticides working on redlegged earth mite?

RLEM resistance testing in 2024

DPIRD, with co-investment from GRDC, will be undertaking RLEM resistance testing this year.

If you notice RLEM surviving applications of insecticides, please contact DPIRD Research Scientist Svetlana Micic to discuss and arrange for paddocks to be tested.

Correct pest identification is important

RLEM and lucerne flea have different environmental requirements for hatching of over-summering (i.e. diapause) eggs and the difference in time can be important when considering insecticide application timing and length of efficacy such as post sowing pre-emergent sprays.

Correct identification of mites is also critical for effective control, as different species can vary in their susceptibility to certain insecticide groups, either naturally or through insecticide resistance.

RLEM adults are 1 mm long with a black body and eight red-orange legs. Immature nymphs are often a more reddish colour. For more information see DPIRD's Diagnosing redlegged earth mite page.

Image 2: Redlegged earth mites on canola. Photo courtesy of: DPIRD

RLEM can co-exist with and look similar to blue oat mites.

Other common mites are bryobia (clover) mite and balaustium mite, but resistance has only been found in RLEM. For more information on identification of mites refer to GRDC's Redlegged earth mite best management practice guide.

You can request or confirm identification of mites by emailing the PestFacts WA team at pestfactswa@dpird.wa.gov.au.

Management of mites

Before spraying mites, consider if the crop is out-growing the feeding damage. In many years, and under good growing conditions, mites emerge from eggs during or after crop germination and the plants outgrow mite feeding damage.

For more information refer to DPIRD's Earth mites - economic considerations for management page.

For registered insecticide recommendations for mites refer to DPIRD's 2024 autumn winter insecticide guide.

Further information

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

Article author: Bec Severtson (DPIRD Northam).

Early pest alert - Rutherglen bugs

- Mullewa

Image 3: Rutherglen bug nymphs on 1 leaf wheat plants. Photo courtesy of: Melanie Kupsch (DPIRD).

Senior Research Scientist Brenda Shackley (DPIRD) recently reported that high numbers of Rutherglen bug nymphs have infested newly emerged wheat in her time of sowing trial at Mullewa. The wheat trial was sown into canola stubble on 10 April with a pre-sowing spray of chlorpyrifos and alpha-cypermethrin, however this did not offer protection from the invading bugs.

Rutherglen bug adults and nymphs are known to survive on canola stubble at the end of spring and into summer, feeding on canola seed on the ground. Young nymphs hatch in autumn from eggs laid on vegetation or on the soil and can emerge in large numbers in search of vegetation.

Image 4: Rutherglen bug nymphs on canola stalk. Photo courtesy of: Svetlana Micic (DPIRD).

Rutherglen bug nymphs are small, dark reddish brown and wingless with a swollen pear-shaped body. Adults are 4mm long, have clear wings folded flat on the back, are grey-brown-black in colour and are very mobile.

Rutherglen bugs may damage early sown crops and pastures that emerge in warm conditions. They are often associated with goosefoot, otherwise known as mint weed. The damage they cause is similar to mite sucking, resulting in seedlings becoming stunted, discoloured and distorted. Rutherglen bugs cause the most damage to moisture stressed plants.

Most emerging crops will not have sufficiently high populations of Rutherglen bugs to warrant spraying, however chemical control may be difficult when they are present in large numbers. Repeat sprays are sometimes necessary against re-invasion. Effective control of Rutherglen bugs may involve managing canola stubble and host weeds at the end of the previous season.

For insecticide recommendations, refer to DPIRD's 2024 autumn winter insecticide guide.

Growers are reminded that pre-sowing insecticide sprays are often unnecessary unless there is pest pressure from a high green bridge, pasture etc. Instead, post-sowing pre-emergent sprays are much more effective in protecting germinating seedlings from ground pests (e.g. redlegged earth mites), while post emergent sprays protect seedlings from aerial pests (aphids, moths, bugs).

For more information, see the department's Diagnosing rutherglen bug and Rutherglen bug – economic considerations pages.

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

Article author: Bec Severtson (DPIRD Northam).

Mid-West canola growers should monitor for Dongara weevil

- Dongara
- Yardarino
- Mingenew
- Nangetty
- Mount Budd

Image 5: Dongara weevil and canola seedling hypocotyl with visible chewing damage. Photo courtesy of: Christiaan Valentine (DPIRD).

The Dongara weevil was detected near Mingenew in early April in pitfall traps set by Technical officer Montana Bradley (Mingenew Irwin Group (MIG)), and east of Dongara by DPIRD research staff as part of the 2024 pitfall trapping program in the Geraldton port zone.

Mid-west growers are reminded that Dongara weevil is known to inhabit certain clay soils in the Dongara and Mingenew region. The weevils can cause extensive damage to emerging canola by chewing on the hypocotyl at or just below the soil surface.

Dongara weevils are tiny, approximately 3 to 5 mm long, and appear dark brown to black in without prominent markings. They are smaller and darker than other weevils that commonly damage canola. Weevils can be very hard to find as they hide at the base of seedlings or in cracks in the soil during the day and are active at night. Placing pitfall traps into the ground can be an effective way to find weevils.

Dongara weevils have survived high-end rates of insecticides used for common pests of canola, including other weevils. Preliminary laboratory tolerance testing has shown chlorpyrifos to be effective on these weevils, bifenthrin to be somewhat effective, and

alphacypermethrin to have low efficacy. As with other weevil pests, spraying in the evening when the weevils are active can be more effective.

The Dongara weevil surveillance program is part of a 2-year Grains Research and Development Corporation (GRDC) and DPIRD co-funded project. To read about the key findings to date, refer to the 2023 PestFacts WA Issue 21 article Dongara weevil investigation update.

Further Information

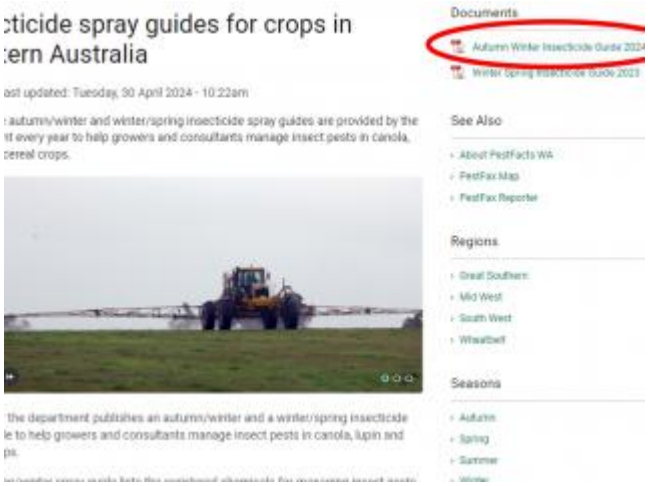
For more information on canola pest weevils visit DPIRD's 2023 PestFacts WA Issue 3 Identifying weevils and Diagnosing weevils in canola pages.

If you are unsure of the type of weevil you have found in your crop, you can email the PestFacts WA team to request an identification by our entomologists.

For more information contact Research Scientist Andrew Phillips, Geraldton on +61 (08) 9956 8567.

Article author: Bec Severtson (DPIRD Northam).

Updated insecticide guide 2024 and changes to insecticide registrations



DPIRD's 2024 autumn winter insecticide guide is now available and can be downloaded for free at the department's Insecticides page.

This spray guide is updated every year to include the chemicals and rates registered by the Australian Pesticides and Veterinarian Medicines Authority (APVMA) that can be applied to canola, cereal and lupin and other grain legume crops for controlling the common seedling insect pests. This includes foliar sprays and seed dressings.

A notable change in this spray guide includes the addition of Isocycloseram, registered as a seed dressing for canola seed for protection from redlegged earth mite. Also, Thiamethoxam seed dressings are now approved for management of green peach aphid in lupins, chickpeas, field peas and canola, as well as cereal crops. Additional alpha-cypermethrin and bifenthrin active ingredient concentrations are listed, along with several recently registered trade names. The active ingredient maldison has been renamed to malathion and label variations have been made.

Some chlorpyrifos products are no longer registered, including chlorpyrifos 300g/L and lambda-cyhalothrin 15.4g/L insecticides for use on canola, lupin and cereal pests. Chlorpyrifos use is under review by the APVMA and during this time continues to be registered for use. The permit for use of Pymetrozine for aphid pests in lupins has now expired.

The spray guides are only a guide, and growers still need to read chemical labels before use.

Not all insecticide trade names may be listed so growers should also check with their retailers for any other registered insecticide options.

To download these spray guides and other useful insecticide information visit the department's Insecticides page.

An Australian grains chemical toxicity table has been developed to help growers and advisors make informed choices about the insecticides and miticides they use in their

crops. It summarises the toxicity of foliar chemical sprays on beneficial insects. This table was a collaboration between Cesar Australia and University of Melbourne, with investment from the Grains Research and Development Corporation (GRDC) as part of the Australian Grains Pest Innovation Program (AGPIP).

For more insecticide information contact Research Scientist Svetlana Micic, Albany on +61 8 9892 8591 or Research Scientist Bec Severtson, Northam on +61 8 9690 2131.

Article author: Bec Severtson (DPIRD Northam).

Free insect identification service

If you find unfamiliar insects in your paddock during the growing season, use the free insect identification services provided by DPIRD to have them correctly identified.

Image 6: Double-spotted line blue butterfly. Photo courtesy of: Bec Severtson (DPIRD).

Recently, some growers near Morawa and Mingenew noticed a prolific number of small blue butterflies and were concerned that they may a pose a threat to crops during the season. Research Scientist Christiaan Valentine (DPIRD) was able to confirm them as native double-spotted line blue butterflies, likely blown in with easterly winds from areas that had received recent rainfall and are affiliated with native vegetation.

Image 7: A native looper caterpillar on stubble at Dalyup, Esperance. Photo courtesy of: Anonymous Grower.

A grower in Dalyup, near Esperance, recently enquired about a caterpillar found on stubble and was concerned about potential caterpillar issues in the upcoming season. To avoid unnecessary insecticide use the grower prefers to monitor and adjust sowing times to avoid pests and has only had to spray once in 10 years for webworm. Research scientist Svetlana Micic (DPIRD) confirmed that it was a native looper close to pupation, and not a crop pest. A further identification to species was not possible without clearer photographs showing the back and head of the caterpillar.

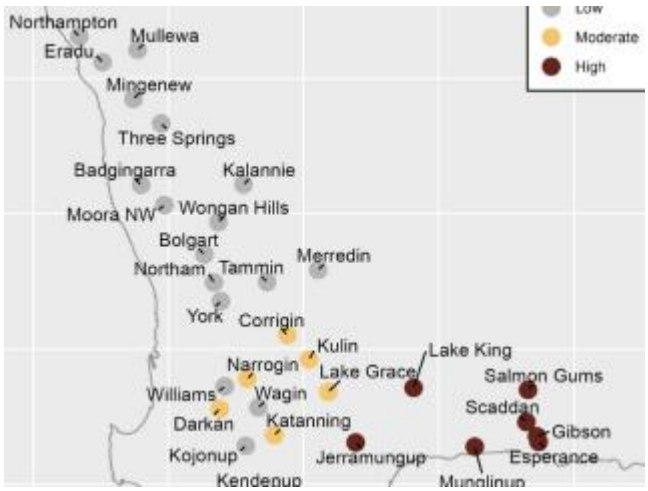
Identifying and reporting the locations of broadacre crop and pasture pests to the PestFacts WA team is important so that other growers and consultants can be made aware of insect occurrences.

The PestFacts WA Reporter app is temporarily unavailable. You can request or confirm identification of potential broadacre insect pests by emailing the PestFacts WA team at pestfactswa@dpird.wa.gov.au or by contacting the following DPIRD Research Scientists or entomologists:

- Andrew Phillips, Geraldton on +61 8 9956 8567
- Svetlana Micic, Albany on +61 8 9892 8591
- Dusty Severtson, Northam on +61 8 9690 2160.

Article author: Bec Severtson (DPIRD Northam).

Canola blackleg risk forecasts



Map showing the relative current risk of spores coinciding with the seedling stage based upon Blackleg Sporacle model outputs for various locations in Western Australia, 29th April 2024. Map generated by: DPIRD blackleg forecast model.

DPIRD's blackleg spore maturity forecasts for Western Australia for the 2024 growing season have begun, and forecasts are available online. The latest forecast is current for crops sown up to 29 April 2024. This forecast will be updated weekly.

Blackleg crown canker can result in yield losses on susceptible canola varieties. The disease occurs when spores are released off the previous season's or 2-year-old canola stubble. When these spores land on canola plants in the early vegetative stage this can result in crown canker forming. It is advised to avoid planting this year's canola crop into paddocks that were sown to canola in 2022 or 2023.

The forecasts show the expected risk of blackleg infection occurring during the 4-6 leaf stage, relative to the date of sowing. For crops sown in the mid-to-late April period, the risk of blackleg spore showers coinciding with the seedling susceptible stage are high for some areas in the Albany and Esperance areas. Growers in these areas should consider using the BlacklegCM decision support tool to determine if they should apply a foliar fungicide to their canola crops during the susceptible 4-6 leaf stage. BlacklegCM is available for download from the Apple App and Google Play stores. This app previously only worked on tablets but is now also available for phones. For more information refer to DPIRD's Blackleg CM page.

If you are using the BlacklegCM decision support tool you can manually enter the blackleg risk levels that relate to your sowing date and location into the app under the "Crop Circumstances – Spore maturity risk" section.

Further information

For more information, refer to DPIRD's Canola blackleg spore maturity forecast for Western Australia page to check the blackleg model forecast for your district.

For more information about blackleg in canola contact Senior Research Scientist Andrea Hills, Esperance on +61 (0)8 9083 1144 or Principal Research Scientist Jean Galloway Northam on +61 (0)8 9690 2172.

For more information about the blackleg risk forecast, or the BlacklegCM decision support tool, contact Principal Research Scientist Jean Galloway, Northam on +61 (0)8 9690 2172.

Article authors: Janette Pratt (DPIRD Moora) and Jean Galloway (DPIRD Northam).

Important Disclaimer