Mallee Farmer

ISSUE #26 SUMMER EDITION 2026

Featuring

A local working dog program creating Mallee mates

A look at the support available in tough seasons

An insight into farming systems trials underway at Kinnabulla

A snapshot of the National Soil Monitoring Project

And much more.

mallee catchment management authority

Contents

Acknowledgement
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Australian Government | mallee catchment management authority

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Front cover photo:
Working dogs at the 2025 Mallee Mates Working Dog School
Photo: Cheryl Torpey, Mallee Landcare Group

Acknowledgement of Country
Mallee CMA acknowledges and respects Traditional Owners, Aboriginal communities and organisations. We recognise the diversity of their cultures and the deep connections they have with Victoria's lands and waters. We value partnerships with them for the health of people and country.

Mallee CMA pay their respects to Elders past and present, and recognise the primacy of Traditional Owners' obligations, rights and responsibilities to use and care for their traditional lands and waters.

Chair's Report

Welcome to the latest edition of *Mallee Farmer,* a Mallee Catchment Management Authority (CMA) publication designed to keep farmers across the region in the know.

We've listened to your feedback, and to that end we have been working hard to include even more local stories from the Mallee region. You'll still find the all-important research, trends and latest news in dryland farming that *Mallee Farmer* is known for, but in this edition you'll also find some lifestyle reads – stories from locals about some really wonderful programs and initiatives making a difference to the lives of farmers across the Mallee.

This starts with the Mallee Landcare Group's successful Mallee Mates Dog School program, which sees farmers and working dogs from across the Mallee come together to learn, teach, socialize and build lasting connections. It's an innovative and practical program, and it's fabulous to see so many people supporting it.

Mallee Farmer also caught up with Mallee Track and Community Health Services to chat about its Rural Outreach Program, which provides free, confidential support for people living in the Mallee who may be feeling overwhelmed, isolated, stressed, or under pressure. It's no secret that the farming industry has its fair share of ups and downs, and this program is designed to help and support locals through these times.

With another sweltering summer upon us, we've also included some information from Agriculture Victoria on risk factors regarding hay fires, the importance of correct water storage to help prevent evaporation, and some information on Victorian Government drought support grants.

As Chair of the Mallee CMA Board, I'd like to thank each and every one of you who subscribe to, read and/or contribute to *Mallee Farmer* – it's a publication we are very proud to bring to you, and we hope you enjoy it. We always love to hear your thoughts, feedback and ideas, so please don't hesitate to reach out to our team at info@malleecma.com.au

Until the next edition, may 2026 be a successful year for you,

Narelle Heard
Board Chair
Mallee Catchment Management Authority.

Would you like a copy of the Mallee Farmer?

Send us your contact information and we will post or email a copy to you.

Email: reception@malleecma.com.au

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Uncertain seasons, uneven impacts for Victorian farmers

By Dr Sara Hely, Director of the Victoria Drought Resilience Adoption & Innovation Hub

Storm clouds over a wheat paddock in Western Victoria.
Photo: Southern Farming Systems (SW Node).

Why this stop-start season is stretching resilience across farming communities
This summer's weather is a confronting reminder that in the 'uncertain' part of the drought cycle, there is rarely such a thing as simply 'good' or 'bad' weather.

Victorian farmers were juggling two realities at once in early summer: the relief of rain after a long, uncertain season, and the heartbreak of seeing crops damaged or wiped out just as headers were rolling.

A season on a knife-edge
Across much of Victoria, rainfall in recent months has been patchy and below average, putting pressure on pastures, crops and water supplies even as some regions have caught timely falls. Then, late spring and early summer storms delayed harvest in some districts and devastating crops in others, adding another layer of stress to what was already a high-stakes season.

This is exactly what the Victoria Drought Resilience Adoption & Innovation Hub (known as the Vic Hub) describes as the "uncertain period" in the drought cycle, when conditions sit on a knife-edge and every rainfall event has the potential to either buy time or compound losses. For grain, hay and mixed farmers, that means managing risk while knowing that some events, such as severe storms at harvest, can undo years of careful planning in a single afternoon.

Many emotions, all valid
In this context, it is understandable that some producers welcomed the rain, while others felt only frustration and grief as flattened crops, hail damage or delayed harvest eroded yields and quality. Communities carry the emotional load too, with small towns and supply chains heavily exposed to how this harvest plays out.

The Vic Hub's work with farming communities has shown that drought and climate variability are more than technical and financial challenges, they are also deeply personal, affecting identity, intergenerational plans and community confidence. Acknowledging that complexity is a first step in responding well, rather than assuming that any one weather event is either simply a "win" or a "loss" for the whole state.

What resilience looks like in the uncertain period
While no one can prepare perfectly for a severe storm at harvest, there are practical ways to build resilience before, during and after these events. Farmers and advisers across Victoria are already using tools such as seasonal outlooks, soil moisture and feed budgeting, multi-year financial planning, and diversified enterprises to spread risk over time.

The Vic Hub and its partners work to connect producers with research, extension and peer networks that support these decisions, from drought-planning resources and technical guides, through to farmer-discussion groups and mental-health support pathways. These efforts cannot prevent every loss, but they can help businesses and communities adapt, reorganise and keep options open as seasons swing between dry, wet and everything in between.

Standing alongside farmers and communities
As this harvest unfolds, it is important that sector leaders, services and policy-makers recognise the uneven impacts of the current weather, and listen closely to what affected farmers say they need in the weeks and months ahead. For some, that might mean technical support to reassess feed, grain marketing or re-sowing plans; for others, it may be financial counselling, recovery programs or simply space to process what has been lost.

The Vic Hub remains focused on the long-term: supporting Victorian agriculture to navigate the uncertain period, prepare for future droughts and recover more quickly when shocks occur. Right now, that also means naming the reality: this weather can be both a relief and a blow, and farmers living through it deserve recognition, practical support and a say in how resilience is built from here.

To explore these and other resources in one place, visit the Vic Hub resources directory. https://vicdroughthub.org.au/resources

About the Vic Hub
Vic Hub links regional communities with the latest science and research to help strengthen drought preparedness.

It is a platform for exchanges of information, knowledge, technologies and networking with leading industry, community and academic stakeholders to drive the trials and adoption of innovations that will improve economic, environmental and social resilience to droughts and other extreme climatic events.

One of eight hubs established nationally through the Australian Government's Future Drought Fund (FDF), the state-wide collaboration is led by the University of Melbourne (UoM), with headquarters at UoM's Dookie Campus, and includes five farming-systems organisations (Birchip Cropping Group, Food & Fibre Gippsland, Mallee Regional Innovation Centre, Riverine Plains and Southern Farming Systems), four universities (UoM, Deakin, Federation and La Trobe), and the State Government (through Agriculture Victoria).

Visit our website to learn more about the Vic Hub's partners and its work: https://vicdroughthub.org.au

Australian Government
Department of Agriculture, Fisheries and Forestry

Future Drought Fund

Vic Hub DROUGHT & INNOVATION

Building drought resilience across the Victorian Mallee

By: Jack Roney, Mallee CMA

The Victorian Mallee region is taking proactive steps to prepare for future droughts through a suite of community-led projects funded under the Regional Drought Resilience Planning (RDRP) Program, an initiative of the Australian Government's Future Drought Fund in partnership with the Victorian Government.

The Mallee Drought Resilience Plan sets out a vision for a region that is prepared for future droughts, with reduced impacts and improved guidance for communities, economies, and environments to cope sustainably. In support of this vision, Mallee Catchment Management Authority (CMA) is coordinating the delivery of priority actions identified in the plan.

Six projects have been selected through a competitive grant process, each addressing key themes such as farming, finance, collaboration, wellbeing, and natural resource management.

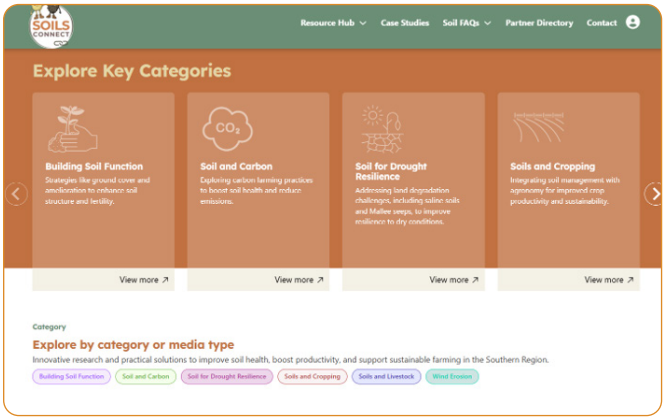
1. Understanding the Mallee Looper caterpillar
Led by Wildlife Unlimited, this project tackles the recent outbreak of the Mallee Looper caterpillar, which has devastated thousands of hectares of woodlands across Victoria, South Australia, and New South Wales. By combining citizen science with professional biodiversity networks, the project will establish monitoring sites, raise awareness through social media and workshops, and foster tri-state collaboration. This initiative not only addresses an immediate ecological challenge but also builds lasting community frameworks for responding to future climate impacts.

Community members using DIY light traps to monitor moth emergence, a key component in tracking the Mallee Looper caterpillar outbreak.
Photo: Mallee Conservation

2. Online resources for pulse growers
Pulses are a key crop in the Mallee, but they're vulnerable in dry conditions. Frontier Farming Systems is developing digital resources to help growers make decisions before and during drought, including videos, virtual paddock tours, and interactive tools. These online resources will provide practical advice on managing drought risks and improving decision-making.

Lentils at a Frontier Farming Systems trial.
Photo: Frontier Farming Systems

3. Information hub for Mallee farmers
Mallee Sustainable Farming is creating a dedicated information hub for the Victorian Mallee within the SoilsConnect platform, centralising resources on soil health and drought resilience. The online information hub will provide easy access to fact sheets, podcasts, and case studies, helping to improve soil function and farm viability during dry conditions.



Mallee Sustainable Farming 'SoilsConnect' resource hub (soilsconnect.com.au).

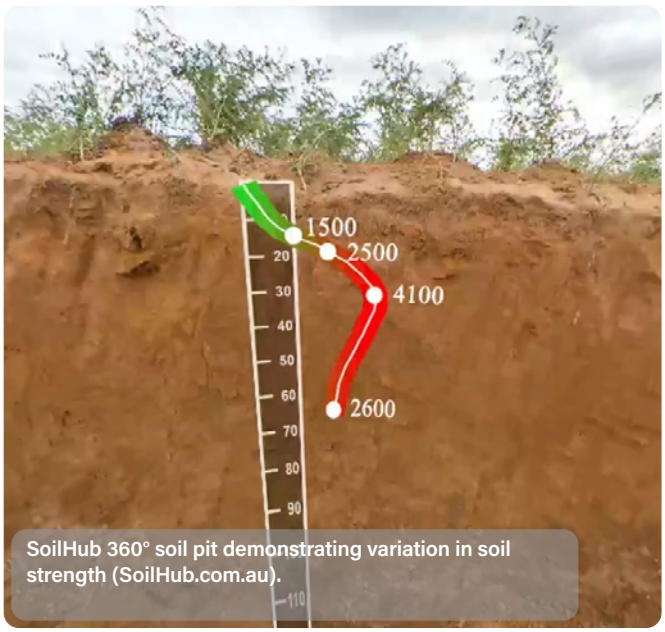
4. Resilient business planning
Through workshops apd scenario modelling, Ag Insights Consulting will help dryland farmers understand how climate variability affects profitability and risk. Using advanced modelling tools, farmers will see how changes in enterprise mix, rotations, and investments affect long-term viability. Workshops will also involve the financial sector, helping banks and advisers better understand the realities of farming through drought.

Ag Insights Consulting will help dryland farmers understand how climate variability affects profitability and risk .
Photo: Mallee CMA

5. Mallee Mates Working Dog School II
This wellbeing-focused program, delivered by Mallee Landcare Group, combines working dog training with mental health coaching. Farmers will learn low-stress stock handling techniques while bonding with their dogs, fostering social connections and resilience. The program also promotes awareness of local health and wellbeing services, ensuring farmers have the support they need during tough times.

Training in progress at the 2025 Mallee Mates Working Dog School .
Photo: Cheryl Torpey, Mallee Landcare Group

6. Expanding SoilHub.com.au
Extend XR will enhance the SoilHub platform with immersive digital content and paddock-scale soil management tools. The platform provides practical insights into soil variability and constraints through virtual soil pits and interactive models. Field days and workshops will complement the online resources, encouraging data-driven decisions to improve productivity and drought resilience.



SoilHub 360° soil pit demonstrating variation in soil strength (SoilHub.com.au).

These projects reflect the diverse needs of the Mallee community and demonstrate the power of collaboration in building long-term resilience. From improving farm profitability and soil health to supporting mental wellbeing and biodiversity, the initiatives will help communities adapt to a changing climate.

Acknowledgements
The Regional Drought Resilience Planning program is supported by Mallee CMA, through funding from the Australian Government's Future Drought Fund and the Victorian Government.

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National soil monitoring project

By Cameron Flowers, Mallee CMA

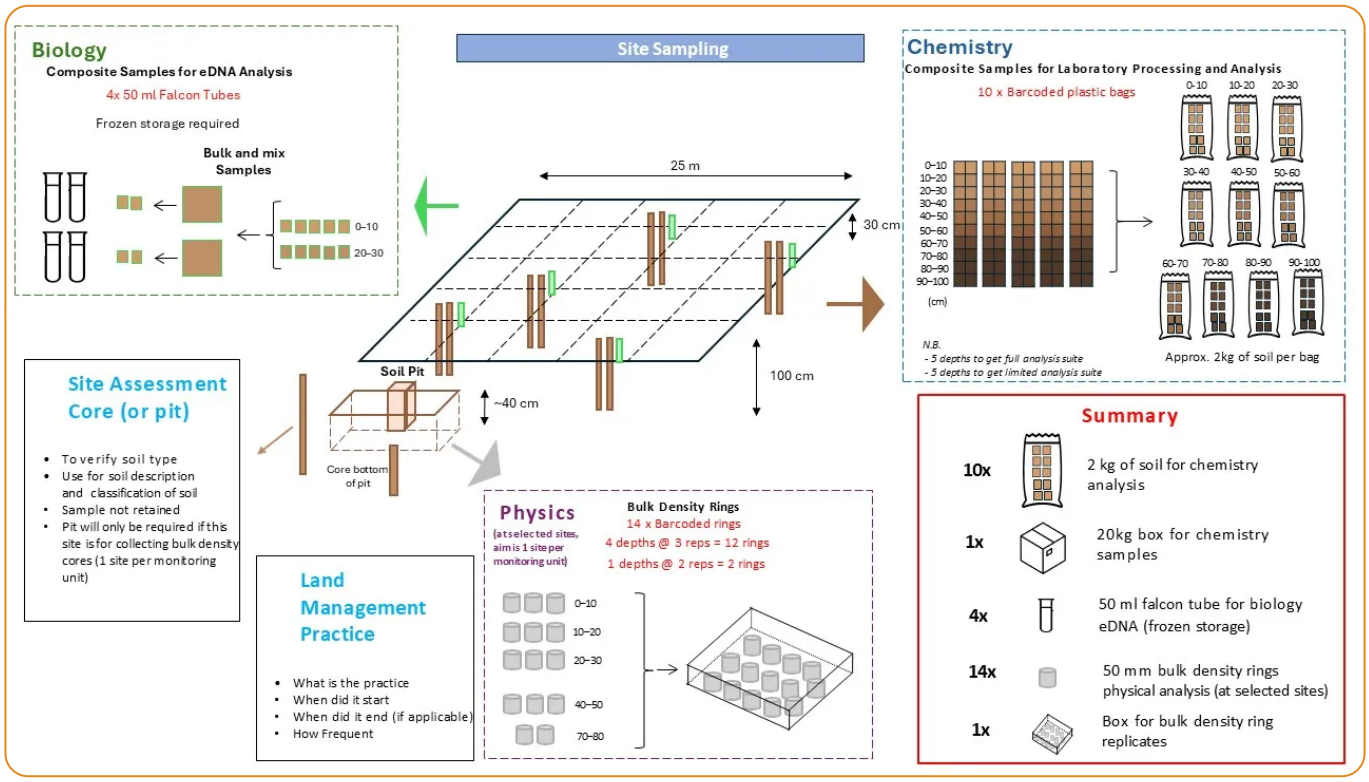

Figure 1: A snapshot of how soil samples are collected at each monitoring site. The diagram shows the site layout, depth intervals, and sample types collected to measure soil chemistry, biology, and physical condition in a consistent and repeatable way. Image credit: CSIRO

Preserving and supporting healthy soil through effective soil management is critical for climate-smart, productive and sustainable agriculture.

The National Soil Monitoring Project (NSMP) is being undertaken to help understand changes in soil condition across Australia and will provide the information required to identify trends over time, ensuring this natural asset remains agriculturally and environmentally productive for current and future generations.

This nationally consistent, regionally relevant data will enable policy makers to make evidence-based decisions for soil related sustainable agriculture matters at regional, state and national levels.

CSIRO is working in partnership with the Department of Agriculture, Fisheries and Forestry (DAFF) to design and deliver the NSMP, applying a consistent approach to measuring soil condition across different landscapes and land uses.

Mallee Catchment Management Authority (Mallee CMA) is undertaking soil sampling across the Victorian Mallee as part of this national program, contributing region-specific data from one of Australia's most important dryland farming regions.

Mallee CMA field crew have now completed sampling at 23 sites on private land across a variety of soil types for chemical and biological analysis. Work is underway to sample the remaining 23 sites, which include both private farmland and public land. Soils supporting remnant vegetation on public land sites will service as reference (baseline) sites.

At selected locations, Agriculture Victoria will also be undertaking bulk soil sampling using soil pits and bulk density cores to record soil physical properties. Sustainable Agriculture Facilitator with the Mallee CMA, Cameron Flowers, has said it has been very interesting to carry out the work on a range of sites and soil types.

Mallee CMA conducting sampling on farm
Photo: Mallee CMA

Up to 15 soil cores are extracted at each site, to a depth of one metre
Photo: Mallee CMA

"We have sampled soil types from sands, loams, clays and gypsum across the changing Mallee landscape and seeing the variations in soils as they change to a depth of 1 metre. We also greatly appreciate the assistance from landholders allowing us access to their properties and providing paddock information," he said.

The NSMP is focused on supporting more productive, healthier and resilient soils, and promoting climate-smart, sustainable and productive agriculture.

For further information, visit:
www.research.csiro.au/nsmp
Or contact:
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Acknowledgements
The National Soil Monitoring Program has been supported by funding through the Australian Government Natural Heritage Trust (Department of Agriculture, Fisheries and Forestry) in collaboration with CSIRO.

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Mallee Mates: training dogs and connecting farmers

By Ashlee Winton, Mallee CMA

Patience and focus on display as working dogs await their turn during training
Photo: Mallee Landcare Group

Participants at the 2025 Mallee Mates Working Dog School
Photo: Cheryl Torpey, Mallee Landcare Group

For participants of the popular Mallee Mates Dog Program in Ouyen, the old saying "man's best friend" couldn't be more accurate.

Returning for its second delivery, the program sees farmers and working dogs from across the Mallee come together with connection and learning at the forefront – and the positive results are speaking for themselves.

Mallee Landcare Group Facilitator Marissa Shean said the program is about much more than dog training, offering participants the chance to socialize in a notoriously isolating industry.

"Farming in the Mallee can be an extremely isolating career path, and the stresses and effects of drought can really weigh heavily on farmers," she said.

"It really is a one man show the majority of the time, and while that's just the nature of the industry, it's really important to remember that human connection and taking care of our mental health and wellbeing is super important, and the Mallee Mates Dog Program is a way to do just that."

Delivered over 4 sessions, participants learn from expert trainers Sarah and David Lee from Lee's Working Dog School in Edenhope. The training includes low stress stock handling, enhancing the bond between owner and dog, exploring the science behind the human/animal connection and how to build a stronger bond with their working dogs to increase overall health and wellbeing.

But equally important is the simultaneous delivery of mental health and wellbeing activities and workshops by 2020 Agrifutures Rural Women's Award Vic winner Kelly Barnes, which offers vital social connection, peer learning, networking and sharing opportunities.

"On the first day of the program, 12 participants and their dogs from Underbool, Ouyen, Patchewollock, Tempy, Turriff, Red Cliffs, Mildura, Birchip, and Areegra walked in

Stock handling exercises at the 2025 Mallee Mates Working Dog School
Photo: Cheryl Torpey, Mallee Landcare Group

as strangers – but by the final week, a group of friends with common interests had been formed, and it's truly a wonderful thing to see," Marissa said.

"It quickly became a really safe space and trusted environment for people to share their own experiences, seek advice, help and opinions from their own colleagues.

"A surprising outcome from the program was that 75% of the participants were women. They are the farmers, stock managers and farm workers - they live on farms or are married to farmers and run their own sheep businesses and they thrived during this course! A lot of these women are busy mums juggling multiple roles, however they all connected and really enjoyed each other's company and this experience.

"The fellas also got a lot out of the working dog training, using body language, simple voice commands and reducing the pressure on the dog. They all really enjoyed working with, networking and meeting other farmers.

"The resilience coaching sessions covered topics like emphasizing the importance of maintaining physical, mental, social, and emotional wellbeing during times of high stress and isolation, learning coping mechanisms with the physical and mental stresses of drought, the benefits of taking time away from the farm and reducing pace to minimize risks and accidents.

"The skills, strategies and resources learned are able to be shared amongst family, peers and the wider community, which is an outstanding result."

David and Sarah Lee (Lee's Working Dog School)
Photo: Cheryl Torpey, Mallee Landcare Group

Marissa said something as simple as being able to have a face-to-face yarn over a shared morning tea during the program yielded great results.

"We're talking about people not just in an isolated industry, but also geographically isolated too," she said.

"Being able to support social participation, connectedness and learn new skills while also providing information and resources about local support programs like Mallee Track Health and Community Services and the Rural Outreach Program is a really fun way to bring people together, and we're so proud of the little community we've built so far.

"Participants who have completed the program now have their own group chat where they connect, have a chat, ask questions and offer advice to one another and at the end of the day, that kind of inclusion is exactly what we hoped to achieve."

If you would like to register your interest or find out more about the Mallee Mates Dog Program, contact:
Marissa Shean, Mallee Landcare Group
Mobile: 0458 922 055
Email: landcaregroupmallee@gmail.com

Acknowledgements
This project of the Regional Drought Resilience Planning program received funding from the Australian Government's Future Drought Fund and the Victorian Government.

PARTICIPANTS SAID:

"No matter how young or how old you are, give it a go! There is always something to learn. Have a go, it's well worth it."

"You'll be surprised with the outcome, I would recommend it. If you are committed to improving their stockmanship definitely DO IT!"

"All great, great people, awesome information and training, it was great. My dog started as a potato that sat in the middle of the yard. Now we can drive both directions around stock confidently!"

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Reaching out across the Mallee Track

By Ashlee Winton, Mallee CMA

Simone Grayling, Rural Outreach Worker at MTHCS

The Mallee Track Health and Community Service (MTHCS) Rural Outreach Program provides free, confidential, short-term support for people living in the MTHCS catchment who may be feeling overwhelmed, isolated, or unsure how to access help. The program focuses on early support, connection and service navigation, rather than crisis intervention. Our aim is to help people feel supported, informed and connected and to reduce barriers to accessing the right services at the right time.

The program supports people who:

- Are feeling stressed, overwhelmed or isolated
- Are experiencing changes in mental wellbeing (such as anxiety, low mood or distress)
- Are carers or supporting family members
- Are dealing with financial, housing or life stressors
- Are finding it hard to navigate services or paperwork
- Would benefit from talking things through with a trusted local worker

You don't need a diagnosis, referral or crisis situation to access the program.

What does the program offer?

- One-on-one support, in person or by phone.
- Can come to you, at home, on the farm, in community or at a private consult space.
- A safe space to talk things through
- Help identifying goals and next steps
- Information about local services and supports
- Support to make referrals or attend appointments
- Check-ins and follow-up where appropriate
- Connection to community activities to reduce isolation

Support is flexible and tailored to each person's situation. The program is not a crisis or emergency service. If someone is in immediate danger, we will help them connect with Mental Health Triage or Emergency services (000) where appropriate.

Rural Outreach Workers do not provide long-term counselling, but can help connect people with appropriate services, including ongoing counselling and psychology either in person or via telehealth in their own homes.

What do people commonly seek support for?

- Feeling lonely or isolated
- Stress, anxiety or low mood
- Family or relationship issues
- Caring responsibilities
- Housing or financial stress
- Navigating mental health services
- NDIS or aged care pathways
- Transport or access barriers
- Grief and loss
- Major life changes or health issues

Often, people come with more than one concern. Rural Outreach Workers can help individuals with developing manageable goals to address concerns when they become overwhelming. Client feedback consistently tells us that people value:

- Having someone local to talk to who is easily accessible and has the flexibility to meet the client at a location that best works for them.

- Feeling listened to and understood
- Not being rushed or judged
- Getting practical help as well as emotional support
- Clear information about what services can help

Many clients say the program helped them feel less alone and more confident in taking next steps.

How do referrals work?
People can:
- Self-refer
- Be referred by a family member, GP, service, school or community organisation
- Be referred through Murrayville, Ouyen and Sea Lake Neighbourhood Houses
- Contact Rural Outreach general enquiries 0498 723 639

Referrals are simple and flexible. There are no forms required to get started — just a conversation.

What happens after a referral?
After contact is made:
1. A worker will get in touch to talk about what support might help
2. Together, goals and next steps are identified
3. Support is provided for as long as it's helpful
4. If needed, referrals to other services are made with consent

"The Rural Outreach program has been developed to support rural people to access services. Sometimes we know we need help but just don't know where to start," said MTHCS Director of Community Services Lyndal Munro.

"There are numerous support agencies and telehealth services available, but knowing which ones are available locally can be difficult to work out. The Rural Outreach workers can support people to access the right service at the right time.

"We see Rural Outreach as a vital service to the community and are proud of the difference our workers make to people's lives in the Mallee community."

Rural Outreach Workers can be contacted via text or call on:
Renae: 0429 090 942
Simone: 0492 001 181
General Enquiries: 0498 723 639

Mallee Landcare groups continue rabbit control efforts

By Nelson Burand-Hicks, Mallee CMA

Rabbit control remains a high priority for Landcare groups in the Mallee CMA region, with coordinated efforts continuing to protect the region's agricultural land and vulnerable native ecosystems.

The Mallee CMA supports 27 active Landcare groups across the region, which includes delivering the annual Victorian Landcare Grants. These grants support Landcare and environmental volunteer groups and networks with funding for on-ground works, education and capacity building projects that protect and restore our land and natural environment.

Data analysis of the 2024-25 Victorian Landcare Grants round in the Mallee showed:
- 80% of funded projects had rabbit control on roadsides as a primary focus, using control options such as fumigation and ripping.
- 25% of rabbit control projects also targeted weed control as a shared objective.
- 13% of projects focused on native tree planting within peri-urban and farming communities.

Rabbit control is seen by Landcare groups in the Mallee as having multiple benefits, being listed by groups as important for protecting threatened species in Council roadsides from grazing impacts and allowing the regeneration of seedlings, as well as reducing crop damage to agricultural land.

This coordinated approach complements the ongoing work of Councils and local farmers. It shows the importance of integrated pest management, starting on farm and working with surrounding land managers to achieve the best possible results for environmental and agricultural benefit.

For further information, please contact:
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Mallee Regional Landcare Coordinator, Mallee CMA
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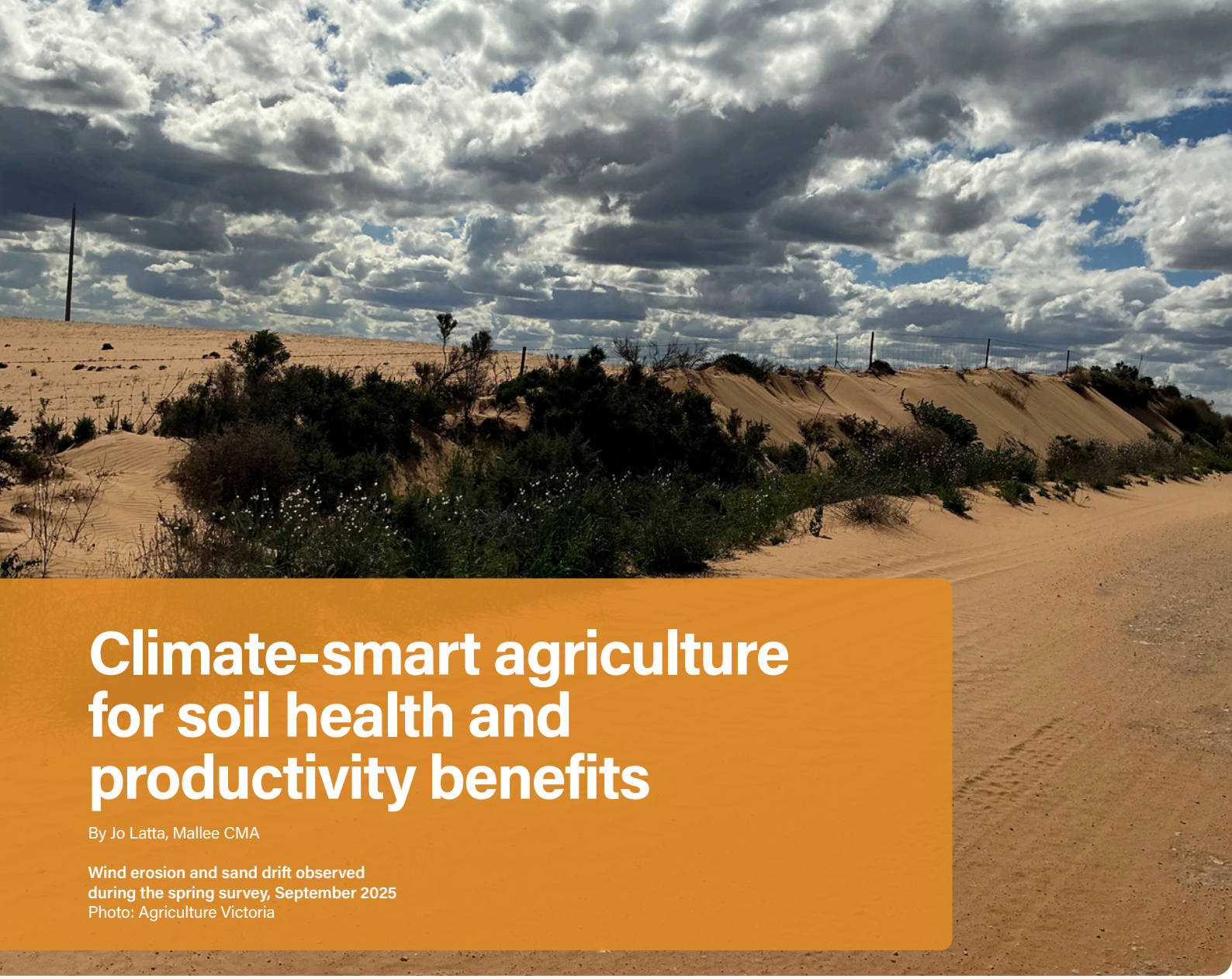

Climate-smart agriculture for soil health and productivity benefits

By Jo Latta, Mallee CMA

Wind erosion and sand drift observed during the spring survey, September 2025
Photo: Agriculture Victoria

A regional partnership of Mallee Catchment Management Authority, Agriculture Victoria, Birchip Cropping Group and Mallee Sustainable Farming is working with dryland farmers across the Victorian Mallee to identify and validate management practices that can support sustainability, productivity and profitability improvements under a variable and changing climate.

Commencing in 2024, this four-year project is focusing on addressing a key challenge for Mallee farmers; maintaining groundcover at the level required to protect their most valuable resource: soil.

Implementing changes that support increased groundcover and overall soil stability has always been a priority for farmers managing the region's light sandy soils, particularly in dry years when the risk of wind erosion increases and careful management is required to ensure that on-farm (e.g. soil health) and broader community (e.g. dust storm) impacts are minimised. As the impacts of climate change become more evident (i.e. increased rainfall variability and temperatures), identifying alternative or modified practices that provide for climate-ready systems and effective responses to seasonal conditions will be critical to achieving regional groundcover targets and to the long-term sustainability of Mallee farming.

Project delivery is helping to address this challenge by focusing on two key drivers of groundcover and associated soil health outcomes in low rainfall cropping systems: stubble and legume management, while also monitoring how current management practices are influencing groundcover levels across the region.

Sustainable Soils and Stubbles
Birchip Cropping Group
Crop residue stubbles are the primary source of groundcover on Mallee cropping soils over Summer and Autumn. While retaining stubble can conserve moisture and reduce erosion risk, high stubble loads can also present challenges when sowing the next crop. Practices such as burning to manage heavy stubble loads may however contribute to greenhouse gas emissions and pose risks to environmental sustainability, with detrimental effects on soil health, biodiversity and air quality.

Working with local farmers, Birchip Cropping Group (BCG) is seeking to identify stubble management practices that support both productivity and soil health improvements, regardless of the season, while also understanding any associated implications for carbon emissions.

Post-harvest stubble in a Mallee wheat paddock
Photo: Birchip Cropping Group

Key activities include:

- Reviewing existing stubble management methods to better understand what drives decisions (e.g. environmental impact, economic value) and key knowledge gaps.
- Establishing ten on-ground demonstration sites across the region to identify, validate and promote alternative practices that improve the sustainability, productivity, and profitability of low rainfall farming systems.
- Extending project findings to the wider farming community through field days, workshops, and publications, ensuring growers have access to locally relevant, tested strategies.

Since commencement, 12 demonstrations have been established across the region, with seasonal monitoring underway to assess impacts on soil health and practical implications for growers.

Legume Based Cropping Systems

Mallee Sustainable Farming

As the diversity of Mallee cropping systems continues to expand with increased use of legume 'break crops' to disrupt pest, disease and weed cycles; key questions remain for many farmers over which rotations are most profitable and their associated impacts on soil fertility and groundcover.

Growing legume crops on sandy soils can be particularly challenging, with sub-optimal yields and vegetative groundcover an ongoing risk that may negate any potential benefits to soil condition and productivity and increase the soils vulnerability to ongoing erosion - impacting subsequent crops.

To help address these questions, Mallee Sustainable Farming is comparing a range of different rotations with high legume intensity over four seasons (2025-28).

Key activities include:

- Establishing a long-term trial site to identify, validate and promote legume-based rotations and associated management practices that provide for profitability and sustainability gains within high-risk landscapes (i.e. rainfall deficits x sandy soils).
- Undertaking comprehensive monitoring of soil moisture and soil health indicators to compare and inform crop choices and inputs.
- Promoting project findings through workshops, field days, digital products and media articles.

Trials for the 2025 season have been completed, with monitoring continuing into 2026.

MSF Long-term trial site in 2025
Photo: Mallee Sustainable Farming

Wind Erosion and Land Management
Agriculture Victoria
The Mallee Soil Erosion and Land Use Monitoring Framework incorporates data from roadside transect surveys with remote sensing applications to identify long-term and within-season changes in both management practice and groundcover levels across the region. Delivered by Agriculture Victoria, ongoing implementation of this framework is supporting the development and delivery of targeted engagement and communication activities to reduce the incidence and impact of wind erosion in the Victorian Mallee.

Key activities include:
- Undertaking a roadside survey of over 1,000 representative paddocks in Spring and Autumn each year to collect land use and groundcover data.
- Utilising remote sensing technologies to identify changes in crop extent/type and fractional groundcover.
- Developing decision support tools (e.g. maps, statistics) and associated extension materials to increase awareness of regional groundcover observations, thresholds and trigger points for managing groundcover on farm to reduce soil erosion risks.

Observations from the Spring 2025 survey can be found on page 23 of the Mallee Farmer.

For more information on this or any of the Mallee CMA's projects:
Follow @MalleeCMA on Facebook or Instagram
Visit our website at www.malleecma.com.au
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Acknowledgements
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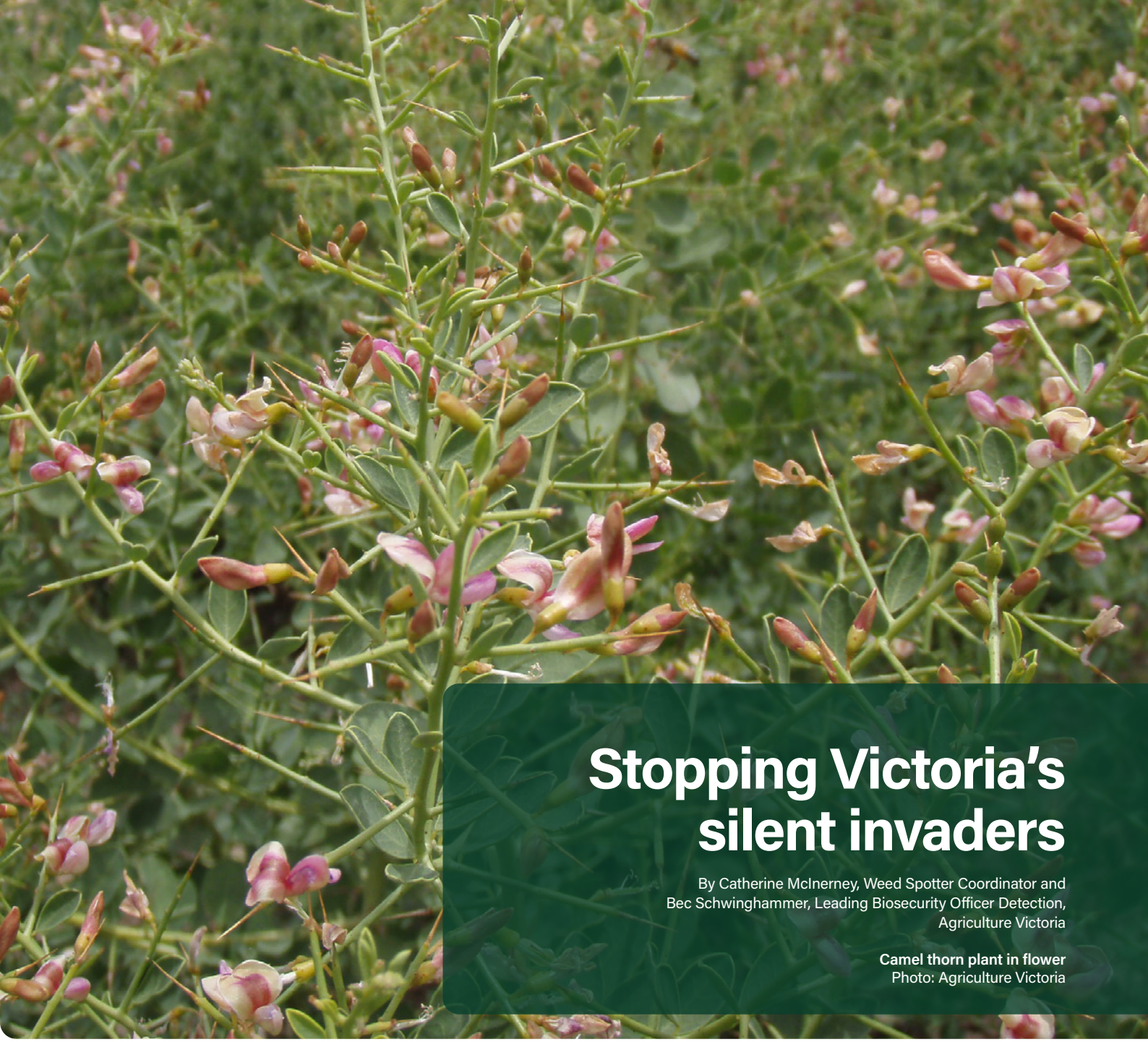
Mallee Sustainable Farming | BCG SHARED SOLUTIONS | mallee catchment management authority



Stopping Victoria's silent invaders

By Catherine McInerney, Weed Spotter Coordinator and Bec Schwinghammer, Leading Biosecurity Officer Detection, Agriculture Victoria

Camel thorn plant in flower
Photo: Agriculture Victoria

Some weeds are more than just a nuisance — they're a serious threat to Victoria's farms, environment and local communities. Some of the highest risk species are declared as State Prohibited Weeds (SPWs), and they're some of the most dangerous weeds in Victoria.

Agriculture Victoria works to stop these weeds before they spread. We do this through the High Risk Invasive Plants program.

What are State Prohibited Weeds?
State Prohibited Weeds – or SPWs - are plants that have one of the following characteristics:

- do not occur in Victoria but pose a significant threat if they invade
- are present in very small numbers and can reasonably be expected to pose a serious threat
- are declared as SPWs under the *Catchment and Land Protection Act 1994.*

It is against the law to buy, sell, display or move these weeds in Victoria.

Why early action matters
All weeds can damage our natural landscapes, agricultural lands and waterways by displacing native species, contributing to land degradation and reducing farm productivity.

Stopping SPWs early prevents new weeds from establishing in the landscape.
This then reduces impacts and risks associated with:

- reduced farm production
- high cost to control
- environmental, social and human health impacts

We work with the local community, industry and other government agencies to find and remove SPWs.

Where these weeds might grow
These weeds can be seen in a variety of places. It depends on where they spread from and how they grow. One example is camel thorn, a weed found in northern Victoria, including the Mallee region.

Camel thorn grows as a shrub and is covered in yellow tipped spines
Photo: Agriculture Victoria

Camel thorn has distinctive flowers that grow in spring and summer
Photo: Agriculture Victoria

What to know about camel thorn
Camel thorn is a tough plant that grows in:
- drainage lines
- irrigated pasture
- neglected land.

It has deep roots that each year can grow over 2 metres deep and spread up to 8 metres across. These roots can break through sealed roads.

The plant also has sharp spines that can injure animals. Camel thorn can spread when root pieces are moved during farming.

Camel thorn comes from eastern Europe, the Middle East and Central Asia. It was first recorded in Australia in 1915 at Rutherglen.

How to spot camel thorn
Camel thorn is easy to identify if you know what to look for.
It:
- is a spiny shrub that grows up to 1.5 metres tall
- has blue-green oval or arrow-shaped leaves
- has many yellow-tipped spines
- flowers in spring and summer with pink-purple or yellow-brown flowers
- produces red-brown pods with smooth, kidney-shaped seeds.

It dies back in winter and regrows in spring from its long-lived roots.

Help stop the spread
If you think you have found camel thorn, report it to Agriculture Victoria and help protect Victoria from this high-risk weed.

Early action makes a big difference. Together, we can stop these silent invaders before they spread.

To learn more or report a camel thorn infestation, visit agriculture.vic.gov.au/state-prohibited-weeds

AGRICULTURE VICTORIA

BCG farming systems trial on show at Kinnabulla

By Louisa Ferrier, Birchip Cropping Group

BCG's farming system trial at Kinnabulla
Photo: BCG

Real-time yield data appearing on the monitor in the harvester cabin offers growers early insights into the efficacy of decisions made throughout the year, or on longer-term rotation decisions over several years. In this particularly water-limited year, where the growing season rainfall in many regions of western Victoria was Decile 1, questions are coming up: "Did this paddock get the Nov rain last year?", "Did the fallow in the rotation, two years ago, have an effect on yield this year?", "Is my decision to switch varieties this growing season paying off?"

Two long-term systems projects, established by BCG at locations across Western Victoria, are rigorously testing the effects different rotations have on profitability and sustainability. There are nineteen rotations being tested in total and with several years of data now collected, they are revealing preliminary insights into the effects of crop type and variety selection, nitrogen program, inclusion or exclusion of livestock, weed control and fallow on profitability and productivity.

Two of the systems trials at Kinnabulla were highlighted at a BCG Crop Walk held in early October, with differences observed between treatments. Wheat following fallow in the rotation exhibited noticeably better grain fill and more biomass production- a clear sign of how stored soil water earlier in the system continues to influence outcomes in a dry finish.

Both trials will equip farmers with knowledge to better understand the drivers of their profitable and sustainable farming systems, particularly how soil nitrogen and moisture move through the system based on the various rotations. Many of the treatments were designed in consultation with local farmers and advisors, ensuring the work reflects real world decisions in the region.
The Southern Australian Farming Systems project, funded by GRDC, is being led by the University of Adelaide and BCG is delivering three sites across the region at Kinnabulla, Manangatang and Wallup.

Another large-scale farming system trial, "Drought resilience mixed cropping systems trial", is delivered by BCG and is distinguished from others by the inclusion of livestock. This project, led out of the University of Melbourne and funded through the Future Drought Fund, focusses on drought resilience for mixed farming systems.

At the Crop Walk, BCG Senior Research Manager, Dr Yolanda Plowman said the Southern Farming Systems trial research was revealing insights into how 'nitrogen moved through the system' utilising several measurement strategies including soil testing and biomass assessments.

She also shared a simple grading system that gave treatments a score from A to D, much like the way a

paper would be marked at school. Based on pairing soil mineral N with total soil water status of each treatment, the plots were graded accordingly (see Table 1). Growers can apply this during harvest to help analyse how individual paddocks have performed this year in terms of resilience, soil water use and grain fill outcomes.

Give your paddock a grade

Table 1. Give your paddock a grade

Grade	Soil N	Water	Take-home
A. High N, High Water	>50 kg N/ha	>90 mm	Big yield potential but high risk of leaching or lodging if unmanaged.
B. High N, Low Water	>50 kg N/ha	<60 mm	Likely fallow or low extraction last year; can defer N top-ups until rain.
C. Low N, High Water	<30 kg N/ha	>90 mm	Most responsive zone to applied N. Where top-ups will pay.
D. Low N, Low Water	<30 kg N/ha	<60 mm	Nutrient and water limited, avoid chasing yield here.

Why this work matters

As this season shows, decisions made years earlier, such as including a fallow or legume, can significantly influence yield stability and economic performance in a dry finish. These long-term systems trials are generating the evidence base needed to help growers identify the rotations that; build nitrogen efficiently, make best use of stored soil water, enhance resilience in tough seasons and maintain profitability across variable years.
If you would like further trial insights or to learn more about applying the grading system at harvest, please contact BCG or visit bcg.org.au

Systems trials at a glance:

The region

Location: Kinnabulla, Victoria
Average annual rainfall: 370 mm
Average growing season rainfall (Apr. to Nov.): 277 mm

Drought resilience mixed cropping systems trial (2024 to 2027)

Design: Phase replicated – large farmer sown (disc seeder) plots (37 x 100 m), 3 replicates.
Rotation (R) treatments
R1 – Wheat-Barley-Lentil
R2 – Wheat-Barley-Vetch (grazed)
R3 – Lentil-Wheat-X (responsive system – not phased)
Farmer engagement and co-design for regional relevance – favored systems with legumes to build N and reduce reliance on 'bag' N particularly after some high yielding wheat crops (e.g. > 3t/ha) in 2023. Lentil is also a high value crop.

Southern Australian Farming Systems trial (2023 to 2026)

Design: Phase replicated – randomised complete block design with each treatment containing three replicates. Each system contains up to four crop options to represent a specific crop sequence.

Table 2. Southern Australian Farming Systems trial (2023 to 2026).
*Indicates responsive systems.

Sequence ID	Phase 1 "Year 1"	Phase 2 "Year 2"	Phase 3 "Year 3"	Phase 4 "Year 4"	Nitrogen
1	Lentil	Wheat	Wheat	Lentil	Standard district practice
2	Lentil	Canola	Wheat	Wheat	Decile 5
3	Vetch (brown manure)	Canola	Wheat	Wheat	Decile 5
4	Lentil & Faba bean	Wheat	Wheat	Lentil & faba bean	Decile 5
5*	Wheat (advisor)		To be decided		Low
6*	Wheat (strategic)		To be decided		N Bank

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Acknowledgements

Thanks to local farmer Linc Lehmann for hosting both trials and for undertaking the broad-acre operations within the "Drought resilience mixed cropping systems trial".

This project was supported by the Australian Government's Future Drought Fund.

The Southern Australian Farming Systems project is part of a network of nine trials being conducted across South Australia and Victoria as part of the GRDC-University of Adelaide 'Farming Systems South' project ('Enterprise choice and sequence strategies that drive sustainable and profitable southern Australian farming systems').

The FSS project aims to better understand the drivers of profitability and sustainability in farming systems in the southern region. It also aims to better realise water-limited potential, motivated by the perceived 'gap' that remains in profitability and efficiency (e.g. gross margin per mm rainfall) despite good single crop agronomy.

Spring observations: Monitoring wind erosion and land management

By Darryl Pearl, Kathryn Sheffield and Rebecca Mitchell - Agriculture Victoria

Key messages

- Wind erosion poses a significant risk to the Mallee, with the potential to impact 97% of dryland cropping areas, air quality, and the long-term viability of agriculture.
- Wind erosion is influenced by factors such as wind speed and direction, soil moisture and land management, with maintaining ground cover being the most effective mitigation factor.
- To monitor these risks, the 2025 spring transect surveyed 1,134 paddocks in September and October, recording ground cover, land management practices, livestock presence and evidence of erosion. This helps to track changes in land management and pre-sowing practices over time.
- Survey results show that 57% of paddocks were sown to cereals (mainly wheat and barley), 29% to legumes and 2% to oilseeds. Legume plantings increased by 2% from last year (27%), with lentils reaching a record high of 22.6% of all paddocks surveyed. Pasture accounted for 10% of paddocks, with the balance left in stubble, fallow or bare.

2025 Spring Roadside Survey

Seasonal climatic conditions

Climatic conditions influence ground cover, with seasonal rainfall from the previous year affecting both crop biomass and the amount of crop residue left after harvest. Low seasonal rainfall leads to low-biomass crops, while the amount of rainfall influences the rate at which crop residue is decomposed.

Summer 2024/25 rainfall across the Mallee ranged from very much below average in the western parts of the Mallee, to below average in the central, southern and eastern Mallee, with some pockets around Swan Hill receiving average rainfall (decile 7).

March rainfall in areas such as Mildura, Swan Hill, Hopetoun and Werrimull was a significant contributor to soil moisture profiles going into the growing season, with decile 6 to 8 rainfall for the month (Table 1). All other regions relied on stored soil moisture from rainfall events late in spring 2024 which crops could not utilise.

The overall growing season rainfall from April to October was extremely consistent across the Mallee with decile 2 across the region, with Murrayville the only exception at decile 3 (Table 1). However, this consistency was not observed across the individual months in the growing season, with deciles ranging from one through to 9 (Table 1). Winter rainfall mostly fell in July and August, with deciles 5 to 8, while spring rainfall in September recorded deciles of 5 to 6 at Mildura, Werrimull and Murrayville, all other areas ranged from decile 2-4, with limited rainfall during the latter part of October.

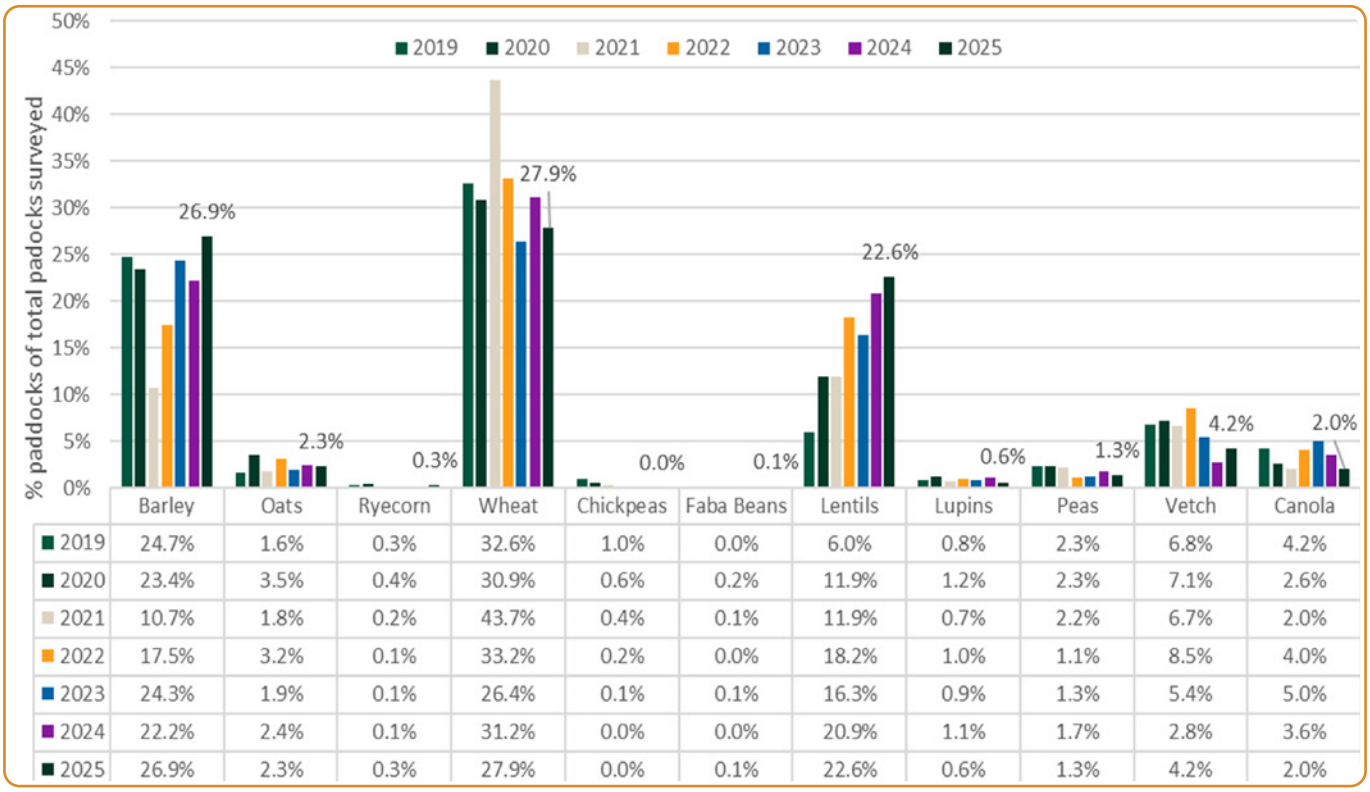
Land use and crop cover

Land use and land cover data is fundamental information that can be used to inform assessments of not only land use practices (and their associated risks in terms of wind erosion), but potential erosion mitigation factors such as vegetation cover.

The 2025 spring roadside transect survey recorded the primary land cover for 1134 paddocks of which 57.3% (650 paddocks) were cereal, 28.8% (327 paddocks) were legumes and 2% (23 paddocks) were oilseeds. Figure 1 shows the breakdown of crop types from 2019 to 2025. Wheat and barley are the predominant crops grown, but their relative proportions vary year to year due to changes in crop rotations, seasonal conditions and market trends. Legume crops, particularly lentils, have shown steady growth since 2019, and this upward trend continued in 2025. There was also an increase in vetch sown between 2024 and 2025. Over the 7-year period of the transect, legumes increased from 16.7% (2019) of the cropped area to 28.8% (2025), while cereals have only declined by 3.3% to 57.3% of the area sown.

Table 1: Rainfall totals (mm) and deciles for the Mallee CMA region for 2024/5.

	Mildura	Decile	Ouyen	Decile	Sea Lake	Decile	Swan Hill	Decile
December '24	13.8	6	13.6	5	12	5	33.4	8
January	4.8	3	12.4	6	13.6	5	6	3
February	1.6	3	1.3	3	0	1	31.4	8
March	10.9	6	2.1	2	2.4	3	27.4	8
April	11	5	10.2	4	1.2	2	38.4	8
May	0	1	0.2	1	8	2	4.2	1
June	11.6	3	21.5	4	31.2	6	27	5
July	33.8	7	35.8	7	44.7	9	42.6	8
August	22.5	5	26	4	17.4	2	14.4	2
September	21.2	6	18	4	13	2	19.8	4
October	7.8	2	13.8	3	12	3	4.4	1
Summer '24-'25	20.2	2	27.3	2	25.6	2	70.8	7
GSR	107.9	2	125.5	2	127.5	2	150.8	2
	Hopetoun	Decile	Birchip	Decile	Murrayville	Decile	Werrimull	Decile
December '24	12.2	5	12	5	14.4	5	9.8	5
January	4.2	3	7.2	3	3	2	8.8	5
February	0.4	1	0	1	2.4	3	0	1
March	11	5	8	4	1	2	18	8
April	12.8	4	11.6	4	2.8	2	7.2	4
May	1.4	1	2.8	1	7.4	1	0.2	1
June	20.6	4	31.4	5	21.4	3	13.2	3
July	44.4	8	47.4	8	51	9	37.2	8
August	34.2	6	31.4	4	26.4	4	22.8	4
September	16.6	3	14.2	2	28	5	20	6
October	18.4	4	23.8	4	30.2	6	9.8	3
Summer '24-'25	16.8	1	19.2	2	19.8	1	18.6	2
GSR	148.4	2	162.6	2	167.2	3	110.4	2



	Barley	Oats	Ryecorn	Wheat	Chickpeas	Faba Beans	Lentils	Lupins	Peas	Vetch	Canola
2019	24.7%	1.6%	0.3%	32.6%	1.0%	0.0%	6.0%	0.8%	2.3%	6.8%	4.2%
2020	23.4%	3.5%	0.4%	30.9%	0.6%	0.2%	11.9%	1.2%	2.3%	7.1%	2.6%
2021	10.7%	1.8%	0.2%	43.7%	0.4%	0.1%	11.9%	0.7%	2.2%	6.7%	2.0%
2022	17.5%	3.2%	0.1%	33.2%	0.2%	0.0%	18.2%	1.0%	1.1%	8.5%	4.0%
2023	24.3%	1.9%	0.1%	26.4%	0.1%	0.1%	16.3%	0.9%	1.3%	5.4%	5.0%
2024	22.2%	2.4%	0.1%	31.2%	0.0%	0.0%	20.9%	1.1%	1.7%	2.8%	3.6%
2025	26.9%	2.3%	0.3%	27.9%	0.0%	0.1%	22.6%	0.6%	1.3%	4.2%	2.0%

Figure 1: Comparison of paddocks sown to different crop types between the 2019 and 2025 Spring Mallee transects.

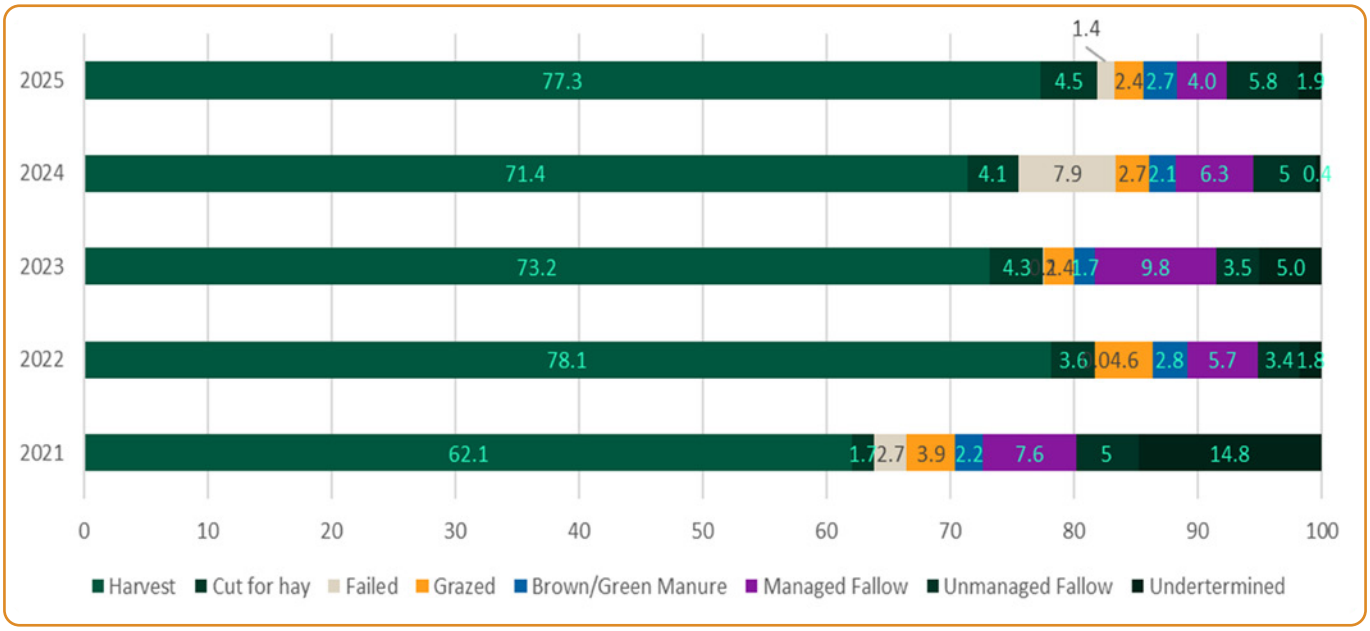


Figure 2: Ground cover management in spring between 2021 and 2025 as a percentage of total paddocks surveyed.

Ground cover management and evidence of erosion
At the completion of the transect survey 77.3% (877) of all paddocks surveyed were intended for harvest, an increase of 5.9% from 2024. 51 paddocks were being cut for hay, while brown or green manure crops made up 2.7% (31 paddocks). 2.4% (27 paddocks) were being grazed, predominantly by sheep (only 2 paddocks were observed with cattle present).

Among all assessed crops, 1.4% (16 paddocks) were classified as failed, a 6.5% decrease compared to 2024. Of these, 8 were lentils, 3 were wheat, and one each of rye and vetch.

Of the 1,134 paddocks surveyed, a total of 51 (4.5% of all paddocks) showed visible evidence of erosion, an increase of 2.2% compared to last year. One of these paddocks had visible drift. Dune crest was the most common type of erosion, present on 30 of the 51 paddocks, followed by bald spots which were mostly observed in cereals, legumes, and pasture paddocks (Figure 3).

Vegetation cover monitoring from satellites
Fractional ground cover datasets are used to quantify vegetation coverage. This dataset is produced using imagery from the MODIS satellite on a monthly basis.

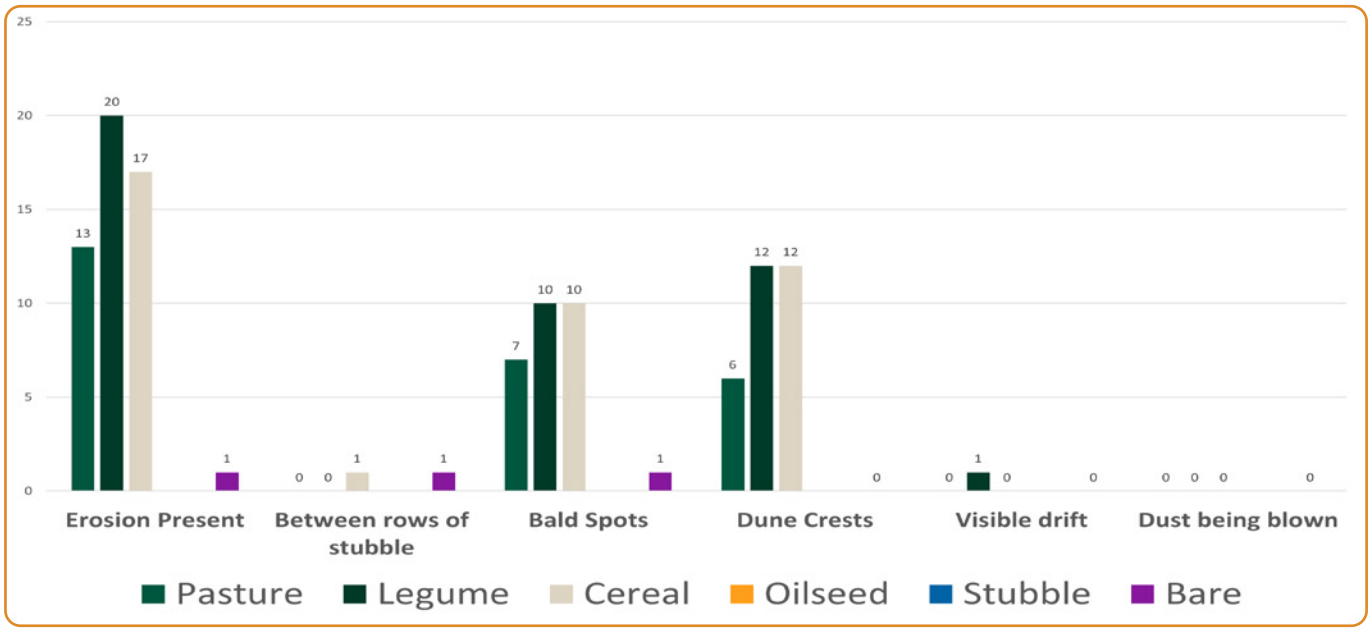


Figure 3: Erosion observed during spring 2025 Mallee transect.

They are used to calculate the area and quality of cover (whether vegetation is living, dead or senescing) and during spring can also identify cereals, legumes and canola crop types, as well as pasture and bare ground in dryland agricultural areas.

A national threshold of more than 50% vegetation cover has been established as the minimum target to protect soils against wind erosion. As seen in Figure 4, most of the Mallee region is protected against wind erosion during September, with much of the area shown in green, indicating good ground cover and reduced erosion risk. In September vegetation cover across most ofthe Mallee was close to average, with only minor anomalies detected.

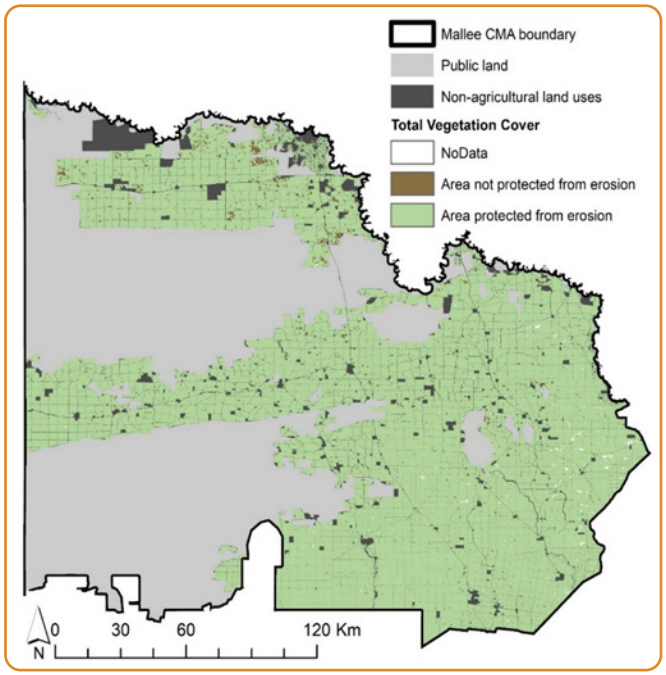


Figure 4: Soil protection from wind erosion across the Mallee CMA in September 2025.

Most of the region maintained sufficient ground cover to protect against wind erosion, indicating a low erosion risk. There were some areas of below average cover (brown areas) predominantly found in the Northern and Central Mallee. The key to maintaining this reduced erosion risk post-harvest is cover management over the summer period, including stubble retention and grazing management.

Summary

Wind erosion can be a significant problem for the Mallee. To better understand the yearly risk, Agriculture Victoria checked 1,134 paddocks this spring. Most were planted with cereals like wheat and barley (57%), while legumes such as lentils and vetch are becoming more common (29%). 2025 rainfall was lower and more variable than usual, which means less crop growth and potentially less ground cover to protect the soil. About 4.5% of paddocks showed signs of erosion. Satellite images show most areas had enough plant cover in September to protect the soil, but some northern and central parts were below average. After harvest, keeping stubble on the ground and managing grazing carefully are key steps to stopping soil blowing away over summer.

Acknowledgements

We would also like to acknowledge project team members Roger Harrower and Sabah Sabaghy on their significant contribution to the collection and preparation of the 2025 spring transect data.

This project is supported by the Australian Government through funding from the Natural Heritage Trust under the Climate-Smart Agriculture Program.

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Celebrating 20 years of community DustWatch

By Jack Roney, Mallee CMA

Dustwatch station at Werrimull
Photo: Mallee CMA

Dust storms have long been a part of life in the Mallee, but their impact on soil health, productivity, and community wellbeing is substantial. When strong winds strip away topsoil, they take with them years of hard work, soil carbon, and fertility. That's why monitoring and managing dust is critical - and for the past 20 years, the Community DustWatch program has been doing just that.

Launched by the NSW Government in 2005, DustWatch is a citizen science initiative that now spans 39 monitoring stations across rural southern Australia, including two in north-west Victoria maintained by Mallee CMA at Werrimull and Walpeup which operate thanks to the cooperation and commitment of local landholders who host the equipment. These stations track airborne particles which indicate dust and smoke levels, and feed real-time data to scientists and policymakers. This information helps us understand how droughts, land management, and climate extremes influence dust events - and how we can respond.

Our region has often experienced challenging conditions during extended dry periods, which have led to reduced groundcover and increased dust activity, highlighting the importance of maintaining groundcover and adopting best management practices to protect our soils.

Data collected through DustWatch shows that when groundcover falls below 50%, the risk of wind erosion increases substantially. Conversely, practices such as retaining stubble, reducing bare fallows, and strategic grazing have proven effective in reducing dust events.

DustWatch relies on people as much as technology. More than 100 volunteers have contributed by maintaining instruments, recording observations, and sharing local knowledge. Their efforts have informed policy, supported research, and influenced land management practices. Surveys show that many participants have adjusted their management strategies after engaging with DustWatch. The program is also a strong example of cross-border collaboration, with Victoria, NSW, and South Australia working together to build a dataset that tracks dust and smoke impacts - particularly valuable during the 2019–20 bushfires.

Looking ahead, climate projections indicate hotter, drier conditions and increased soil vulnerability. This means DustWatch, and the insights it provides, will remain essential. For the Mallee, the message is clear: maintain groundcover, adopt proven management practices, and stay informed.

As we mark 20 years of DustWatch, we acknowledge the volunteers, scientists, and landholders who make this work possible. Their contribution helps protect our landscapes, sustain productivity, and support resilient communities.

For more information or to get involved,
visit environment.nsw.gov.au or contact:
Jack Roney, Mallee Catchment Management Authority
Mobile: 0439 328 599
Email: jack.roney@malleecma.com.au

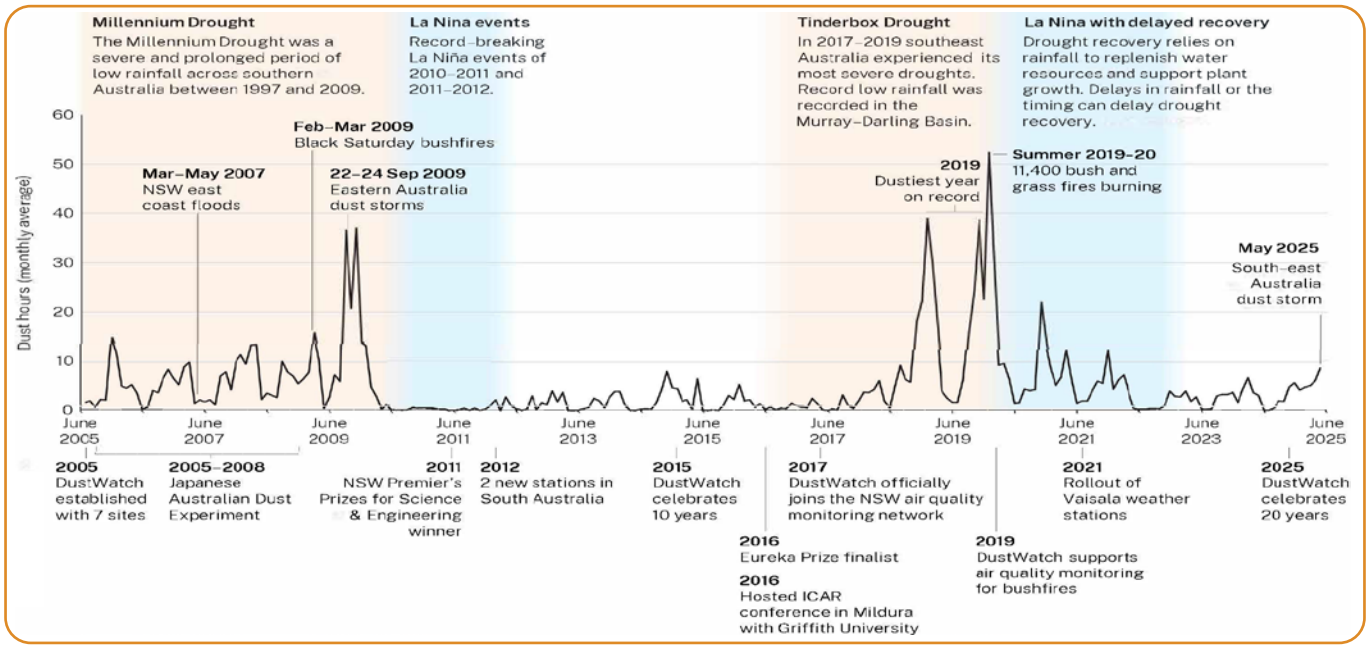

Figure: Time of significant events recorded by Dustwatch (Source: NSW Government)

The Carbon Farming Outreach Program

By Cameron Flowers, Sustainable Agriculture Facilitator

Harvesting in the Mallee
Photo: Mallee CMA

What is carbon farming?
Carbon farming is a land management approach that increases the carbon captured from the atmosphere through photosynthesis and other natural processes that are already occurring on farms. The goal of carbon farming is to increase the efficiency of these natural processes in capturing carbon through a range of agricultural methods that aim to store carbon in the soil and vegetation.

Carbon farming can have the added benefits of increasing farm productivity, benefiting biodiversity and increasing resilience to drought. It can also provide additional income sources and reduce on-farm emissions.

The Carbon Farming Outreach Program (CFOP)
Mallee CMA, in partnership with Agriculture Victoria, is delivering the Carbon Farming Outreach Program in the Victorian Mallee to assist farmers and land managers to make informed decisions on carbon farming and outline how they could benefit from moving to a low carbon future.

The program will be delivering free training across the region, with local experts providing resources and information to understand:

- Benefits and risks for carbon farming
- Changes coming to Australian markets and supply chains
- How to calculate emissions and carbon storage
- Options to reduce emissions and store carbon
- Carbon markets and carbon farming opportunities

Carbon and soil events in the Mallee
In 2025, eight CFOP workshops were delivered across the region, with more planned for 2026.
These events focused on providing practical insights to improve farm productivity and sustainability, while helping farmers understand the role carbon farming can play in their business.

David Hardwick (Soil Land Food) presenting to growers in Irymple, December 2025
Photo: Mallee CMA

Dryland cropping workshops – Hopetoun, Sea Lake, Curyo, Nullawil, Kooloonong
These sessions explored:

- Improving soil health to support long-term farm productivity.
- Calculating your farm's carbon number to understand your emissions.
- Building soil carbon to improve fertility and nutrient efficiency.
- Identifying the main emission levers in broadacre farming systems.
- Choosing carbon activities suited to Mallee soil types and conditions.
- Learning practical ways to improve efficiencies and future-proof your business.

Horticulture Workshops – Red Cliffs, Irymple, Boundary Bend
In December, attention shifted to horticulture and irrigated farming with three soil-health focused events exploring:

- Understanding the physical, biological and chemical aspects of soil health.
- Opportunities for carbon storage and emissions reduction.
- Managing soils to build organic matter and improve water-holding capacity.
- Applying practical strategies that support both carbon storage and productivity.

Together, the eight workshops helped build a clearer picture of what carbon farming can look like in both dryland and horticultural Mallee systems.

Additional workshops will be running at locations across the Mallee in early 2026. All workshops are free and open to anyone interested learning more about soil health, carbon farming and emissions.

Register your interest by scanning the QR code below, or visit the Landcare Victoria website for upcoming CFOP events across Victoria.

For further information, please contact:
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Acknowledgement
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Drought support package

By Agriculture Victoria

The Victorian Government is providing more than $146.5 million in direct support to help farmers and communities across Victoria impacted by drought.

What's available

- Grants up to $5,000 (ex-GST) are available for on-farm improvements and other business activities to help manage drought. An additional $5,000 (ex-GST) top-up in 12 local council areas, including parts of West Wimmera, where drought has hit hardest, bringing the total amount for farmers in these locations to $10,000 (ex-GST).
- Household Financial Relief payments up to $1,000 to eligible farming families and those working on farms affected by drought conditions in southwest Victoria to assist with household expenses.
- Farm management advice and planning help is available. Farmers across the state can now access a second Farm Advisory Service one-on-one consultation. Service providers are supporting the delivery of this statewide program and the group based events.
- Farm debt mediation support, and a duties and fees relief package.
- On-farm Kangaroo Control Rebate Program.
- Mental health and wellbeing events are being funded statewide through the Look Over the Farm Gate program to help bring communities together and support farmers under stress. A new round of funding opens in February 2026.
- In south-west Victoria, targeted household relief payments and cashflow relief in the form of Primary Producer Support Payments.
- Funding support to the VFF for 2 dedicated financial capability officers to provide practical support directly to farming communities across Victoria.
- Small business support through a new Community and Local Business Activation fund to help local councils, chambers of commerce and trade associations deliver local projects to boost business in the 12 worst drought-affected LGAs in south-west Victoria.
- Support for Rural Financial Counselling Service wellbeing counsellors across the state.

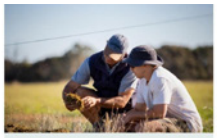
More information

For more information about the Drought Support Package scan the QR code, visit: agriculture.vic.gov.au/dryseasons, email drought.support@agriculture.vic.gov.au or phone 136 186.

AGRICULTURE VICTORIA

Grants and financial support

Help is available for eligible farmers doing it tough in the drought, including grants for on-farm infrastructure, water carting and pasture re-establishment.

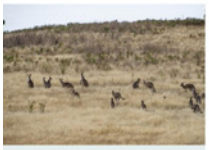


Help with farm management decisions

Get expert advice through the one-on-one farm advisory service or join other farmers at local events. Support for difficult decisions required during drought.

Mental health and wellbeing support

Support is here for farmers, families, and rural communities feeling stressed or overwhelmed.



Managing kangaroos on your farm

Farmers affected by drought can get help to manage kangaroos on their land.

Moving hay and fodder across states

Need to buy hay or fodder from another state? There's free help to get the right permits and information.

Events for farmers

Join workshops and events to connect with other farmers to discuss topical drought issues such as feeding livestock and farm water reticulation.

Community groups and service organisations

Not-for-profit community groups and charities are supporting drought-affected farmers with fodder donations and other practical assistance.

Commonwealth assistance programs

Commonwealth government programs and services are available to help farmers impacted by drought.

Drought support resource directory

Get a copy of the directory – your guide to drought support programs, technical tools and resources, and personal wellbeing support.

Practical tools and tips for dry seasons and drought

Get tips and tools to help run your farm during dry conditions and drought.

Tools and calculators

Develop feed budgets, water and feed crop calculators and summer water estimates.

Drought programs and policy

Initiatives that help farmers and communities get ready for future drought – and guides government support during and after drought.

The science behind hay fires

By Andrea Henry, Dairy Industry Development Officer, Agriculture Victoria

Spontaneous combustion in hay occurs when internal heat builds up to the point of ignition, as a result of microbial activity and chemical reactions.

Unlike fires caused by lightning or machinery, spontaneous combustion is insidious: it starts deep within a haystack and can smoulder unnoticed until it erupts into flames.

How do spontaneous combustions happen?
Hay is an organic material rich in sugars, proteins and moisture – ideal conditions for microbial growth. When hay is baled too wet or stored before it has fully cured, bacteria and fungi begin to break down the plant matter. This microbial activity then generates heat.

What are the risk factors?
- High moisture content: Hay baled with more than 20% moisture is at risk. Mould growth and fermentation occur when moisture levels are between 20% and 35%.
- Dense packing: Tightly packed bales trap heat and moisture, accelerating microbial activity.
- Poor ventilation: Lack of airflow prevents heat from dispersing.
- Environmental conditions: Warm, humid weather.
- Storage practices: Storing hay in enclosed barns or sheds without monitoring.

What to look out for
Early detection is crucial. Farmers should regularly inspect haystacks for signs of heating:

- Steam rising from the stack
- Musty, caramel or tobacco-like odours
- Mould growth on or inside bales
- Condensation or corrosion under roofing
- Slumping or deformation of the stack.

Using a temperature probe or inserting a metal rod (like a crowbar) into the stack can be used to detect internal heat. If the rod feels hot to the touch after removal, the hay may be dangerously warm and action should be taken.

How to prevent heating hay
- **Cure hay thoroughly:** Allow hay to dry completely before baling and monitor moisture levels using a moisture meter. Ideal moisture content for small square bales is 18% to 20%, large square bales 12% to 15% and round bales 15% to 18%. When making sure hay is cured properly, also test plant nodes and leaf sheaths for hidden moisture.
- **Monitor temperatures:** Use temperature probes or wireless sensors to track internal bale temperatures. If temperatures exceed 55 °C, ;monitor closely. At 71 °C, consider separating bales and increasing ventilation.
- **Improve ventilation:** Store hay in well-ventilated areas. Avoid stacking bales too tightly.
- **Separate risky bales:** Store damp or suspect bales separately. Monitor them more frequently and avoid placing them near dry hay.
- **Limit stack size:** Smaller stacks reduce heat accumulation. Leave space between stacks and walls for air circulation.
- **Protect from moisture:** Ensure roofs, spouts and drainage systems prevent water from reaching hay. Cover stacks with breathable tarps if stored outdoors.
- **Use technology:** Modern sensor systems can provide realtime data on hay temperature and humidity, helping farmers make informed decisions and prevent fires before they start.

What to do if you find heating hay
- Pull apart the stack to release heat and moisture.
- Move bales outdoors if possible.
- Call 000 if smoke or fire is visible.
- Keep fire suppression tools (hoses, extinguishers) nearby.

Never attempt to extinguish a hay fire alone. Fires can reignite and spread rapidly.

Spontaneous combustion in hay is preventable. By understanding the biological and chemical processes involved, farmers can take proactive steps to protect their property and livestock. Proper curing, monitoring and storage practices are the keys to safe hay management.

Find more information about drought support at www.agriculture.vic.gov.au/drought or call 136 186.

AGRICULTURE VICTORIA

What can you do about an evaporating dam?

By Kerri Goschnick, Land Management Extension Officer, Agriculture Victoria

A farm dam after a long dry spell in the Mallee
Photo: Mallee CMA

Now that the warmer weather is upon us, it's essential to monitor your water storage regularly. This helps you understand how much water stock are drinking and what you may be losing through evaporation or leakage.

See if you can identify which is having the greatest impact – water used through stock consumption or water lost through evaporation or leakage. Have you simply run out of water because there has not been sufficient rainfall to produce the required runoff?

To generate runoff into storages, rainfall events typically need to exceed 20mm. If your grass height is over 50 mm, you may need 60 mm or more per event. Many regions have not had these types of events for some time.

Identifying and managing leakage
Leakage from dams often shows up as wet spots or clumps of green grass in a small area during the drier part of the year. This can occur when dry dams fill quickly but dam walls haven't fully re-saturated. If you suspect leakage, consider using treatment products but choose carefully, as many are soil-type specific. You will get the best value when you take this into account.

If you treat your dam, ensure the dam is properly fenced to exclude all stock. Storage treatment products can range from $1,000–$10,000 and should only be used when you are certain that your storage is leaking.

Also, consider safety: add steps or structures to the inside batters to help animals or people exit safely without damaging the treated batter or liner.

Understanding evaporation
Wind has the biggest effect on evaporation. Even in good seasons, you can lose up to 0.75m of water, often half the dam's volume.

Shallow water (less than 1 m deep) warms quickly, increasing evaporation. Dams deeper than 3m retain cooler water and lose less to evaporation.

There are a variety of materials that could be used to cover the dam surface area to minimise evaporation further. Powders, oils and polymers are all affected by wind blowing the product to one side, reducing effectiveness. Plastic sheets, discs and balls are options but also expensive and can cause small animal entrapment.

Expanding or consolidating storage
Storage enlargement is not always an option due to factors such as soil types, contractor availability and seasonal timing for earthworks, a project which can run into the tens of thousands.

Measuring, calculating and adjusting your water use according to what you have available and stock needs is generally the cheapest option.

To work out how much water you currently have available, the "measuring the depth of your dam" video on the Agriculture Victoria YouTube channel provides simple instructions.

This will give you a 'right now' picture of your situation and allow you to plan for the near future.

The Farm Water calculator mentioned in the video will help you with your storage capacities potential when full.

Other considerations:
- Are your dams suitable for the current stock type?
- Do you have a bore or tanks that could replace your required water supply for stock?
- Could I combine low storages into one larger storage to minimise evaporation and maintain water quality? Moving water using poly pipe and a fire pump is a low cost way to do this and it can work well with trough and pipeline systems too.

Explore further resources on water in the farm management section of our website.

Find more information about drought support at www.agriculture.vic.gov.au/drought or call 136 186.

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