



Australian Government
Department of Agriculture,
Fisheries and Forestry



Future
Drought
Fund



SA
DROUGHT
HUB

SA DROUGHT HUB ANNUAL REPORT 2022-23



This program received funding from the Australian Government's Future Drought Fund

The South Australian Drought Resilience Adoption and Innovation Hub

(SA Drought Hub) is one of eight Hubs established in 2021 across the nation through funding from the Australian Government's Future Drought Fund.

The hubs bring together dynamic networks of primary producers, industry groups, researchers, government agencies, universities, agribusinesses, traditional owners and others to work towards a common vision to strengthen the drought resilience and preparedness of Australia's farms and regional communities.



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DIRECTOR'S REPORT

The SA Drought Hub's second year of operation saw it build upon the foundation of its establishment year, expanding its on-the-ground presence and delivering practical tools and knowledge for drought resilience.

The SA Drought Resilience Adoption and Innovation Hub (SA Drought Hub) is delivering significant drought resilience activities for farmers and regional communities across South Australia.

Recent highlights include:

- Establishing a 2023 program of work focused on optimising time of sowing for all grain growing regions in SA. This is an important measure for enhancing drought resilience and mitigate the risk of reduced spring rainfall as well as frost, which is more prevalent when moisture is low.
- Significantly expanding the intern program in partnership with the SA Grain Industry Trust (SAGIT) and key SA grower groups. After initially planning for a single internship, the partnership with SAGIT has been so successful that the hub's current term of funding will deliver seven 1-year internships focused on building skills in farming systems and drought resilience.
- Partnering with Ngarrindjeri Aboriginal Corporation and the Murraylands and Riverland Landscape Board to establish a series of climate yarning circles. These have brought First Nations communities of the lower Murray and lake regions together with ecologists and climate scientists to consider environmental and cultural impacts of climate change.
- Partnering with the Grains Research and Development Corporation (GRDC) on the National Risk Mitigation Initiative (also known as RiskWi\$e). Through this collaboration, the hub is working with the majority of SA's farming systems groups to support projects focused on better decision-making when managing risk.



Dr Stephen Lee

Director, SA Drought Resilience
Adoption and Innovation Hub

Led by the University of Adelaide in partnership with the South Australian Department of Primary Industries and Regions (PIRSA), the SA Drought Hub drives the extension of existing knowledge and practices to build drought resilience in primary production systems.

By fostering collaboration and knowledge-sharing among diverse but aligned organisations and individuals, the hub is building the capacity of the SA agriculture sector to adapt to and fortify itself against the challenges of drought and other climate extremes.

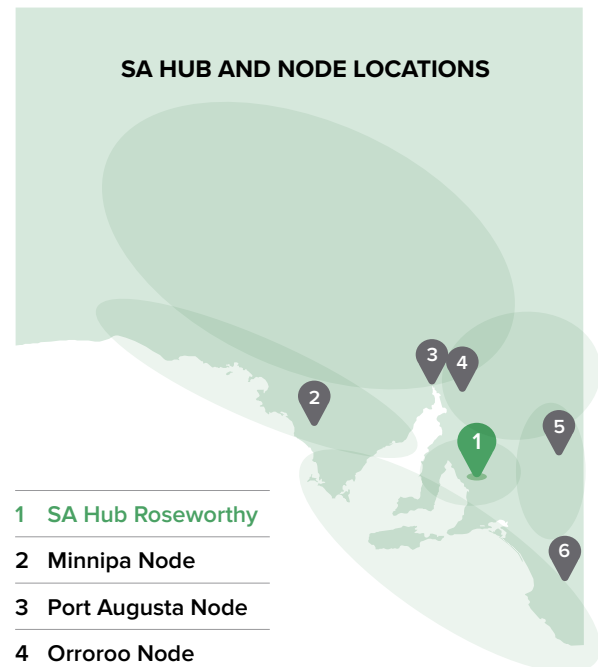
WORKING TO SUPPORT THE REGIONS

The SA Drought Hub is headquartered at Roseworthy with five regional nodes providing statewide coverage of agricultural and horticultural regions across low, medium and high rainfall zones.

The SA Drought Hub has supported 44 projects across its six node regions. All projects are co-designed, and most on-ground projects are led by farming systems groups or community groups from across the state.

In 2022-23, projects were led by:

- Agricultural Innovation & Research Eyre Peninsula (AIR EP)
- Barossa Improved Grazing Group (BIGG)
- Hart Field Site Group
- MacKillop Farm Management Group (MFMG)
- Mallee Sustainable Farming
- Murray Plains Farmers
- Ngarrindjeri Aboriginal Corporation
- Northern and Yorke Landscape Board
- Upper North Farming Systems (UNFS).



1 SA Hub Roseworthy

2 Minnipa Node

3 Port Augusta Node

4 Orroroo Node

5 Loxton Node

6 Struan Node



FIND OUT MORE ABOUT OUR WORK AND PEOPLE THROUGH THE SA DROUGHT HUB WEBSITE

DROUGHT RESILIENCE PROJECTS

The SA Drought Hub supports a wide range of projects across the state, with the objective of enhancing drought resilience across all farming sectors, along with the industries and communities they support.

Since its inception the SA Drought hub has led and enabled many activities to support research, development, extension, adoption and commercialisation. The hub's emphasis on co-designing projects with its members ensures that activities meet stakeholder needs.

90% of respondents to hub learning activity surveys said the content of the hub activity they attended was relevant in helping them to prepare for or respond to future drought.

These activities contain a mix of in-field demonstrations and learning events to support extension and adoption activities. To date, these projects have established demonstration sites on 52 commercial farms and 2 research farms and over the 2022/23 financial year delivered 78 separate learning events attended by a total of 2810 people.



78

LEARNING
ACTIVITIES
HELD



- 30 farm visits
- 30 workshops
- 11 field days
- 3 farmer bus tours

44

DROUGHT RESILIENCE PROJECTS
AND 10 INNOVATION PROJECTS
SUPPORTED ACROSS SA INCLUDING
3 NATIONAL PROJECTS



54

DEMONSTRATION
SITES ESTABLISHED

and visited by 654 farmers
+ 221 advisors, consultants,
government extension
officers, project officers
and grower group staff



Improving on-farm water security using innovative remote sensing systems



LEAD ORGANISATION:
BIGG

OTHER HUB MEMBERS AND PARTNERS INVOLVED:
South Australian Research and Development Institute (SARDI), Coorong District Council

This project established demonstration sites for producers to learn about and observe water monitoring systems to reduce water use, maximise water-use efficiency, monitor salinity and ensure livestock have access to water.

Four trial sites were set up on a range of livestock enterprises (including sheep, beef and dairy properties) to evaluate different tank level monitoring systems. These were monitored over summer 2022-23 and autumn 2023. In April and June 2023, the project has delivered two farm walks and hosted the National Drought Hub Convenors Field Day.

This project was received exceptionally well by the local farming community and the region's advisor network. At all sites, the monitors saved the producer time and money. They also improved mental health, reducing stress levels related to time management and worry about the levels of water in the tanks.



Feedback from participants

Ian and Fiona Koch of Bunyara Merino and Poll Merino Stud installed a sensor on a tank that services the homestead and a number of water troughs (photo, above), watering up to 400 sheep. According to Ian, "The monitor has been an asset to our farm since it was installed late last year. Traditionally the water level was checked by my ageing father, so the monitor has saved him and me a lot of time."

Warren and Barbara Fargher, who run a cattle operation in Flaxman's Valley, said that their water level monitor (photo, below left) saves them "time, fuel and worry" by eliminating the need to travel between blocks every two days to check water levels.

Peter and Jess Mitchell have installed a tank-level monitoring system on their 700-hectare sheep and beef enterprise in the Mt Lofty Ranges. Peter says that in the event of a leak, without the system in place, it would take over a week to catch up the lost water with stock still using it.

The project has been extended in 2023-24 and will investigate the efficacy of other water measuring innovations, such as water quality and water salinity monitors.

Utilising satellite imagery in the growing season to inform adaptive management

LEAD ORGANISATION:
UNFS

OTHER HUB MEMBERS AND PARTNERS INVOLVED:
SARDI, Breezy Hill Precision Ag Services

This project has delivered two workshops to advisors and producers, developed four case studies, and produced a fact sheet outlining effective use of readily available satellite imagery to inform decision-making in the growing season.

The project enabled Upper North growers and land managers to increase their understanding of the tools available for monitoring and measuring factors such as pasture quality and quantity, biomass, and feed quality in the paddock. It also helped them improve their adaptive management to climatic conditions.

Growers also enhanced their knowledge of how to use grazing periods, intensity and spelling to maximise biomass production and maintain soil cover at the end of the season.

Other key project outcomes and benefits:

- **Improved collaboration and communication among local advisors and growers**

The sharing of technology, data and outputs by Upper North growers increased both awareness and the likelihood of adoption of satellite imagery. This was especially important as several growers were first-time users.

- **Representation across the entire Upper North farming region**

The project ranged across the Upper North, covering Booleroo, Wepowie, Morchard, Jamestown and Caltowie. As each of these areas has different rainfall and soil zones, the technology can be adapted across the entire Upper North.

- **Knowledge adapted to seasonal priorities**

The project targeted grower priorities throughout the season, which helped keep participants engaged. For example, the nitrogen case study was very relevant in July; grazing and pastures were topical in spring.

- **Grower-targeted fact sheet with practical advice**

The published fact sheet (pictured) is appropriate for growers at all levels of knowledge, from first-time users to early adopters with substantial experience.



Grower testimonials

Alison Henderson, Hendowie Poll Merinos:

"Having a true understanding of the feed on hand is the key to unlocking grazing efficiencies."

Luke Clark, Clark Forest View:

"The concept worked well as the imagery picked up the weed-affected areas very accurately, meaning we only sprayed 13% of one of our paddocks and 30% of the other."

To access the fact sheet for this and other SA Drought Hub projects, head to our website:



EXTENSION AND ADOPTION VIA CO-DESIGN

The SA Drought Hub's effectiveness is underpinned by its co-design process: all activities – projects, demonstration sites, crop walks, workshops and other training and extension events – are developed with our stakeholders playing a central role in the design process. This participatory approach ensures that results meet the stakeholder needs and barriers to adoption remain low.

The hub's organisational structure reflects this emphasis on co-design. Staff engage with our member organisations – particularly farming systems groups that work directly with producers – and other key stakeholders such as the Rural Research and Development Corporations.

KEY STAFF INVOLVED IN CO-DESIGN AND ENGAGEMENT

Knowledge Broker

Tony Randall

The Knowledge Broker links research with activities that develop drought resilience, supporting information exchange and development of relationships and networks across the state and nationally. The role underpins linkages and collaborative opportunities to drive innovation and adoption of new practices and technologies.



Adoption Officers

Rachel May, Dr Penny Schulz and Dr Hannah Griffiths



Adoption Officers develop networks among research providers and industry to support the growth of regionally coordinated approaches to extension and adoption, working with the Knowledge Broker to connect growers, producers and communities to support provided by the hub.

Ag Innovation Broker

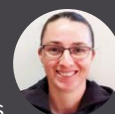
Dr Sean Miller

The Ag Innovation Broker works closely with growers, producers, farming systems groups, advisors and researchers to harness innovation for drought and climate resilience. The role, which is funded by AgriFutures Australia, develops and maintains networks and information flows among producers, researchers and the service sector.



Regional Soils Coordinator

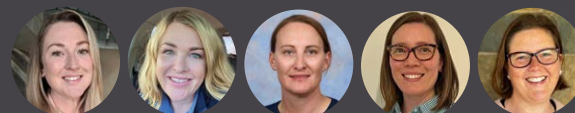
Lucy Porter



The Regional Soils Coordinator promotes the value of soil health, best-practice soil management, project outcomes, knowledge, technologies, and relevant programs and initiatives.

Node coordinators

Zoe Starkey (Loxton), Fiona Tomney (Minnipa and Port Augusta), Joanne Ridsdale (Orroroo), Tamara Zerk (Struan) and Rachel May (Roseworthy)



The hub's Node Coordinators are community members embedded in at the hub's key regional locations, where they work directly with hub members and primary producers to deliver project activities and foster opportunities to develop drought resilience. Their local knowledge and networks give them a deep understanding of the evolving needs of regional stakeholders.

Stakeholder Advisory Groups

Each node hosts a Stakeholder Advisory Group, which works with our Node Coordinators to ensure that producers and end-users drive the project activities – and thus increase adoption of outcomes – through participatory co-design peer-to-peer learning.

Feedback from our Partners

Sandy Kimber,

Executive Officer, Hart Field-Site Group

Setting up the SA Drought Hub was a mammoth undertaking that has ultimately created a team that is inclusive, welcoming and really easy to work with. The Hub projects are highly collaborative and have brought together a diverse range of groups who may not have linked up so easily without the Hub.

CROSS-HUB PROJECTS

Partnerships with other Drought Resilience Adoption and Innovation Hubs and their member organisations have expanded since the commencement of the Cross-Hub projects, with SA Drought Hub member organisations collaborating and partnering directly.

Co-design isn't limited to within the SA Hub, and takes place on several cross Hub projects and new initiatives involving multiple Hubs and their partners.

The SA Drought Hub has been involved in three Cross-Hub projects, as the lead hub in one and a key participant in the other two. These were critical in not only getting hubs to work together, but also in providing a mechanism for SA Drought Hub members to engage with other hubs and their member organisations and understand the opportunities provided by the national hubs network.

Two of the Cross-Hub projects have led to follow-on adoption efforts in South Australia through the SA Drought Hub and FDF's Extension and Adoption of Drought Resilience Farming Practices Grants:

- Farmers2Founders TEKfarm – Accelerating and scaling adoption of drought resilience technologies
- De-risking the seeding program – Adoption of key management practices for the success of dry and early sown crops.



Andrea Tschirner, SA Arid Lands Landscape Board, and SA Drought Hub Knowledge Broker Tony Randall at the Australian Rangelands Society's 22nd biennial conference in Broome, WA, in September 2023, where they joined hub partners and SA pastoralists involved in the Cross-Hub 'Managing rangelands for drought resilience' project.



Participants at a stock containment tour in Keith in 2023, as part of the 'Drought resilience practices in mixed farming systems' Cross-Hub project.

Drought management for the health and longevity of perennial horticulture plants



Project researchers Eva Wang (left) and Dr Pat Vaughan-O'Brien setting up cameras and sensors in a citrus orchard.



Dr Vaughan-O'Brien interviewing Riverland grape grower Aaron Thompson.

HUBS INVOLVED: SA Drought Hub, Southern NSW Innovation Hub, Victoria Drought Hub, TAS Farm Innovation Hub

SA HUB PROJECT PARTNERS: University of Adelaide, Wine Australia, Duxton, Green Brain, Ag Excellence Alliance, Plant and Food Australia, Department of Primary Industries and Regions SA

Australia's horticulture industry is vital to the national economy, producing high-value crops such as grapes, citrus and almonds. In the face of escalating drought challenges, however, the industry faces a critical need for enhanced drought resilience.

The project established 21 grape, citrus and almond demonstration sites across South Australia (4 grapevine, 2 citrus and 2 almond), New South Wales, Victoria and Tasmania.

Project objectives

Three primary objectives focused on different but interconnected aspects of drought management:

1. **AgTech demonstration sites:** Remote capture cameras were installed to track canopy development and provide real-time data, which was integrated with data from weather stations and soil moisture sensors to provide an integrated platform for irrigation decision-making.
2. **Grower engagement in solution design:** Recognising the knowledge and experience of growers, the project actively involved them in co-designing solutions.
3. **Continuous monitoring:** Investigating the potential of time-lapse cameras for continuous canopy monitoring in diverse horticultural settings.
4. **Strengthening industry alliances:** Fostering connections among drought hubs and industry players.

Key achievements

- **Insights for better decision-making:** Access to continuous data streams was invaluable for informed irrigation decisions, enabling growers to:
 - Track canopy growth and development for all crop types, identifying periods of rapid growth and potential stress indicators.
 - Optimise water use, leading to significant water savings without compromising fruit quality or yield.
 - Identify orchard areas with uneven growth or potential disease outbreaks, allowing for targeted interventions.
- **Successful collaboration across hubs and stakeholders:** created opportunities for collaboration and strengthened the R,D,E,A&C foundations of the horticultural industry.
- **Development of a new data stream for canopy growth:** Plant Area Index (PAI) data collected from remote cameras proved accurate and valuable for irrigation management.
- **Potential for improved prediction models:** PAI data can be integrated into tools such as VineLOGIC to help growers find irrigation solutions to optimise plant growth and sustain plant health in water-constrained settings.
- **Increased awareness of drought-resilient practices:** Workshops and extension activities reached a wide audience of growers.

Managing rangelands for drought resilience

HUBS INVOLVED: Northern Hub, SA Drought Hub, Southern NSW Innovation Hub, South West WA Hub, Tropical North Qld Hub, Southern Queensland & Northern NSW Hub

SA HUB PROJECT PARTNERS: SA Arid Lands Landscape Board (SAAL), University of Adelaide, Cibo Labs



Researcher Isabelle Wagelmans uses a basal wedge to collect measurements that will help estimate Mulga cover



Drones are used to map vegetation cover and structure (photos: Andrea Tschirner, SAAL).

This collaborative, multi-hub project has established demonstration sites across Australia to showcase technologies and techniques that use mapping to improve rangeland management.

Through the use of digital precision mapping technologies at the property scale, each site is developing a plan for future management and infrastructure changes that could be implemented to improve drought resilience.

The SA Drought Hub's component is mapping vegetation cover and structure using technologies such as drones equipped with high-tech cameras and a Light Detection and Ranging (LiDAR) sensor and

linking these results to pastoral land management with the national AusPlot network on two properties: Buckleboo, a sheep station northwest of Kimba, and Wintinna, a cattle station north of Coober Pedy.

The mapping is establishing a benchmark of data to monitor long term changes at a paddock scale under rest-based grazing management and measure the impacts on soil health and ground cover.

Ceres Tags are being used to track livestock movement, with data showing significant movement of livestock across the grazing area, and supporting better understanding of how cattle are using the property.

In 2024 the SA Drought Hub and SAAL are continuing to work together to extend the use of AgTech in the pastoral region through a new AgTech Adoption Officer role supporting the *TEKFARM - accelerating and scaling adoption of drought resilience technologies* project led by Farmers2Founders.

Drought resilience practices in mixed farming systems

HUBS INVOLVED: Victoria Drought Hub, SA Drought Hub, TAS Farm Innovation Hub

SA HUB PROJECT PARTNERS: University of Adelaide, AIR EP, Upper North Farming Systems Group, Murray Plains Farmers, Mallee Sustainable Farming, MFMG, BIGG



For mixed farmers in south-eastern Australia drought poses multiple and complex challenges due to impacts on both crop production and pasture and feed availability.

One of the strengths of mixed farming operations in the face of drought is the ability to alter the enterprise mix to reduce risk. However, this is most successful where enterprises have drought management plans and information to guide early decision making. While the ideal decision will differ from farm to farm, depending on their environment and enterprise mix, it is crucial that these decisions are underpinned by good information.

This project is equipping farmers and advisors with tools and regionally appropriate trigger points to make informed and timely decisions about if and when to use containment feeding, which was a high priority in hub consultation. Effective containment helps to preserve ground cover in dry times, thus protecting soil. Moreover, it assists in quicker recovery of feedbase when favourable seasonal conditions return. Many farmers commented that, in hindsight, they acted too late in past droughts, compromising their ability to 'bounce back'.



Key project aims

- Teaching a decision-making process and the creation of regionally appropriate decision tools that can be applied when entering uncertain periods or drought.
- Capturing current best-practice information for containment feeding (including showcasing examples), economic and biophysical information, and optimal extension approaches to the adoption.
- Investigating and demonstrating the use of satellite monitoring data in providing vital information to inform the decisions.

For more information on Cross-Hub projects, visit the hub website:



AG INNOVATION PROGRAM

The Agricultural Innovation Hubs Program, supported by the Australian Department of Agriculture, Fisheries and Forestry, is designed to support innovation in the Australian agricultural system.

The co-designed Ag Innovation activities of the SA Drought Hub are highly collaborative and feature integrated effort among hub members including primary producers (farming systems groups), natural resource management and landscape boards, consultants and trusted advisors, applied researchers, industry groups, and organisations involved in commercialisation.

The innovation activities supported by the hub were completed in September 2023. All were designed to achieve measurable outcomes while also enabling clear follow-up development, extension and commercialisation activities through other initiatives.



The SA Drought Hub's Ag Innovation Program comprises ten dedicated activities spanning the grain, livestock, horticulture, viticulture and aquaculture industries within South Australia. Collectively these industries present over 90% of total primary production value in SA.

Technical reports for these activities, along with case studies and extension materials can be found on the website.



PROGRAM SUMMARY

The Agricultural Innovation Hubs Program has provided significant opportunity for primary producers across South Australia. In 2022-23, the SA Drought Hub's nine Innovation Hub projects engaged 2,798 people across 57 events.

Innovation Hub projects

- Improving the climate resilience of the Australian sheep industry
- Improving climate resilience by matching irrigation to almond canopy size and water use
- Livestock biosecurity extension program
- Enhancing orchard soils
- Cropping without glyphosate
- Hatchery development for commercially important native seaweeds
- Methane reduction in beef cattle in commercial production systems
- Rapid detection of significant crop diseases
- Virtual Fencing for improved climate resilience on South Australian farms.

In designing the activities, the broad membership of the SA Drought Hub was engaged in project co-design. This involved an integrated effort among primary producers (farming systems groups), consultants and trusted advisors, applied researchers, industry groups, and organisations involved in commercialisation.

Each activity centred on delivering tangible improvements in process or decision-making for primary producers in areas of critical importance to agriculture spanning climate resilience, biosecurity, digital agriculture, and access to premium markets.

By focusing on translation of prior research outcomes into accessible innovation approaches and technologies designed for effective adoption or commercialisation, the program delivered measurable outcomes for producers.

Innovation Hub projects Highlights included:

- Farm-based demonstrations of newly developed practical and cost-effective options for sheep producers to mitigate the impact on reproductive rate of heat stress during joining.
- Devices for rapid disease diagnosis in crops, regionally deployed with agronomists, allowing timely decision-making on treatments and reducing the need for central testing in a large laboratory.
- Paddock demonstrations of practical ways to reduce glyphosate use, thus positioning grain growers for continued access into premium markets that may have conditions on use of glyphosate in production.
- Paddock-based demonstration of potential to reduce enteric methane emissions in beef cattle in grazing settings during periods of low pasture feed quality (i.e. low digestibility).
- Proof of concept for a low-cost handheld device to measure greenhouse gas emissions from livestock.

The opportunity provided through the Innovation Hubs Program also showcased the rapid design and delivery of a highly effective initiative alongside the SA Drought Hub's drought resilience focus.

The hub team and membership continue to build on the activities initiated through the Innovation Hubs Program. This has included continuation of "Improving the climate resilience of the Australian sheep industry" within the SA Drought Hub and an expansion of "Methane reduction in beef cattle in commercial production systems" through the Methane Emissions Reduction in Livestock (MERiL) Program.

Cropping without glyphosate

LEAD ORGANISATION: University of Adelaide

OTHER HUB MEMBERS AND PARTNERS INVOLVED: Hart Field Site Group, AIR EP, MFMG, SARDI, AgCommunicators, Grain Producers SA



Lead Researcher Professor Chris Preston, from the University of Adelaide, speaks to attendees at an August 2023 field walk in Concordia (photo: Kahlia Jenke, Elders).

Glyphosate is the most important herbicide used in agriculture in Australia, but this usage is threatened by market pressures, particularly from some premium markets in Europe, as well as from the emergence of glyphosate-resistant weeds.

This project aimed to increase awareness of the problem among the SA grain production community and to explore potential alternative practices.

Seven field trials were conducted in 2022 and 2023 at Wangary, Minnipa, Hart, Struan and Gawler to examine the potential of glufosinate mixed with Group 14 herbicides and other strategies.

The project included six crop walks and a field day at the trial sites, which were attended by 337 farmers, farm advisors and industry participants.



Effect of knockdown herbicide treatments on weed growth 14 days after application at Hart in 2022. From left to right: Untreated; glyphosate + Hammer; Liberty + Voraxor.

Key results

- Mixing glufosinate with Group 14 herbicides can be as effective as glyphosate at pre-sowing weed control, but is considerably more expensive due to the requirement of higher herbicide rates compared to using glyphosate alone.
- The dry sowing trial at Gawler demonstrated the benefits of selecting effective pre-emergent herbicide strategies for dry sown wheat.
- Farmers are becoming more confident in adopting practices to replace glyphosate in their farming systems if necessary.
- Increased interest from the agrichemical industry in exploring solutions to pre-sowing weed control, which may lead to additional choices for farmers in the future.
- Discussion surrounding the project has increased farmers' and farm advisors' awareness of the need to protect glyphosate from loss due to resistance.
- The project increased discussion within the agrichemical industry of potential replacements for glyphosate.

Resources produced



- A video featuring a South Australian farmer discussing the benefits and practicalities of harvest weed seed control and how the practice is used on their farm.
- A podcast episode with a local agronomist discussing strategies of managing glyphosate resistant weeds in the high rainfall zone.
- A fact sheet is being developed to disseminate project results and knowledge more broadly.

Virtual fencing for improved drought resilience on South Australian farms



LEAD ORGANISATION: SARDI

OTHER HUB MEMBERS AND PARTNERS INVOLVED:
University of Adelaide, SAAL, Limestone Coast Landscape Board, MFMG, AIR EP

Overview

This project assessed virtual fencing technology as a tool for increasing the drought and climate resilience of SA sheep and cattle enterprises. Trials were conducted at Wintinna Station, a 3,800km² cattle enterprise in the state's far north, and at Struan in the southeast.

The virtual fencing system delivers cues (an audio tone or an aversive pulse) through a collar, defining invisible boundaries the livestock learn to respect and which can be easily modified remotely. This allows precise control of animal movements, facilitating targeted grazing and exclusion from sensitive areas without physical fencing (e.g. see image, above). It can be applied across varied landscapes and easily integrated into existing livestock management strategies.

Jake Fennell, Wintinna Station

To fence the place, we'd need 24 paddocks for the rotation. That's about 1,100 km – with clearing and everything, it'd be \$5 million-plus. Also, if we can congest cattle for a mustering, it'd save a lot of money. If virtual fencing is successful, it'll make a massive difference to our plans over the next ten years.

Future of virtual fencing in SA

As of early 2024, virtual fencing is prohibited in SA under the state's animal welfare legislation, so cannot be adopted by South Australian producers. However, the SA Government has committed to a review of this legislation, including consideration of lifting this ban.

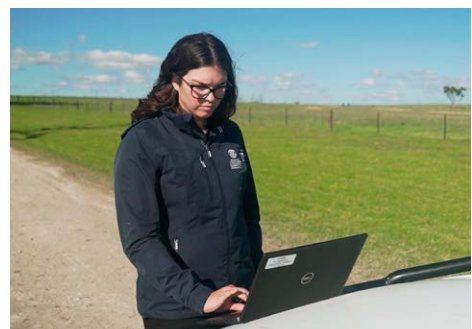
Key results

Wintinna Station trial

- Demonstrated successful control over cattle movement.
- Enabled a more efficient and successful muster by removing the need to use aircraft.
- Improved land management practices, allowing more sustainable rest-based grazing patterns and conservation of the natural landscape.

Struan trial

- Confirmed that sheep (with wool and clipped) can be contained by a commercially available virtual fencing system.
- Proved the technology's effectiveness across different environments, offering insights into its adaptability and scalability for wider agricultural applications.



More information



Contact Megan Willis, SARDI, at megan.willis2@sa.gov.au or visit the project page on the hub website, which includes a video overview of the project and links to:

- 'Commercialisation of virtual fencing for livestock' (PIRSA)
- PIRSA videos describing virtual fencing and how it works on-farm
- SARDI virtual fencing webinar and Struan Field Day 2022
- SAAL videos on the Wintinna trial and virtual field day 2023.

YEAR 2 ACHIEVEMENTS

1 July 2022 – 30 June 2023

 **47 Hub member**
ORGANISATIONS AND
28 NETWORK PARTNERS

34 drought resilience tools and products developed, including fact sheets, case studies, podcasts, videos, websites, newsletters and technical reports



More than **3000** 
people accessed or distributed tools and products developed by the hub

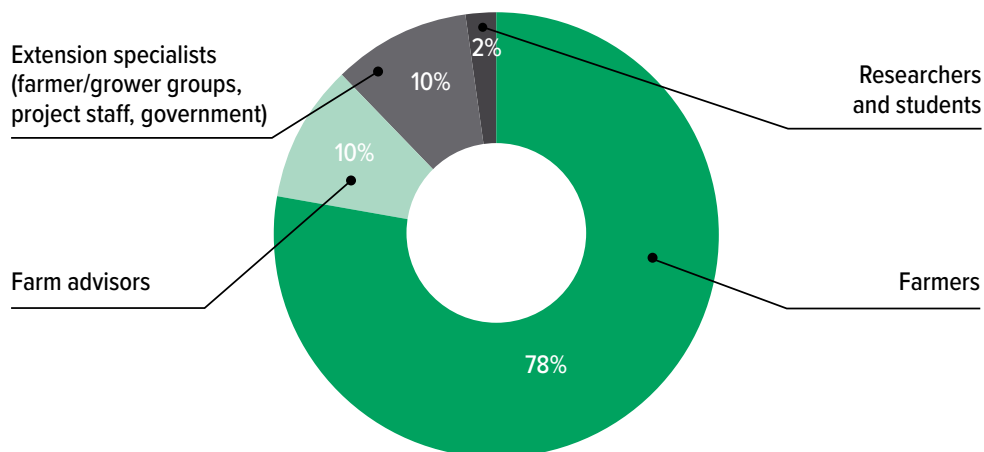
OVER \$23 MILLION IN SUCCESSFUL FUNDING APPLICATIONS SUPPORTED BY THE HUB

NATIONAL CROSS-HUB PROJECTS



WHO'S BEEN AT OUR EVENTS?

TOTAL ATTENDANCE ACROSS ALL LEARNING ACTIVITIES/EVENTS: 2156 PEOPLE



DELIVERY OF KNOWLEDGE AND SKILLS

BASED ON MORE THAN 300 LEARNING ACTIVITY SURVEYS

- 97% of respondents agreed that content provided was easy to understand
- 96% of respondents were likely to use learning activity materials again
- 95% of respondents agreed that learning activity content was relevant to their needs
- 90% of respondents said that learning activity content was relevant in helping prepare for or respond to future drought
- 70% of respondents were likely to make, or consider making, a practice change as a result of attending a hub-supported learning activity

OUR PARTNERS

Hub members include grower and livestock groups, universities, State Government agencies, landscape boards, agribusinesses, and industry groups. In 2022-23, 19 new Network Partners joined through regionally based co-designed projects, taking the total number of members and partners to more than 80.

Hub Members and Network Partners

Thank you to all of our partners, who contribute to the hub's work to support drought and climate resilience activities across South Australia.

Ag Excellence Alliance Incorporated	Farm Bot	Northern Sustainable Sand Hills
AgCommunicators	Fleurieu Farming Systems Inc	Outback Communities Authority - SA Govt
Agricultural Innovation & Research Eyre Peninsula Inc. (AIREP)	Flinders University	PC Treloar
Agriculture Kangaroo Island Incorporated	Frontier Farming Systems	Pinion Advisory
Agronomy Solutions	Gladigau Enterprises	Primary Producers SA (PPSA) Incorporated
AgXtra	Grain Producers SA (GPSA) Ltd	RDA Far North Incorporated
Alinytjara Wilurara Landscape Board	Grassland Society of SA	Regional Development Australia (RDA WEP) Incorporated
Australian Grain Technologies (AGT) Pty Ltd	Green Brain	Rural Business Support Services (RBS) Incorporated
Australian Society of Soil Science Incorporated	HART Field Site Group Incorporated	SA Arid Lands Landscape Board (SAAL)
Barossa Improved Grazing Group (BIGG) Incorporated	Hills and Fleurieu Landscape Board	SA Dept. of Primary Industries & Regions
Barry Mudge Consulting	Indigenous Land and Sea Corporation (ILSC) - Fed. Gov	SA Livestock Consultants
Bentley SA and NT	Kangaroo Island Landscape Board	South Australian Department for Environment and Water (DEW)
Breezy Hill Precision Ag Services	Landcare Australia Limited	South Australian Grain Industry Trust (SAGIT)
Buckleboo Farm Improvement Group (BFIG) Incorporated	Legatus Group (Central Local Government Region of South Australia Inc)	South Australian No-Till Farmers Association (SANTFA) Incorporated
Bureau of Meteorology	Limestone Coast Landscape Board	Southern Australia Livestock Research Council (SALRC) Incorporated
Cibo Labs	Livestock SA Incorporated	Spatial Hub Analytics Pty Ltd (Farm Map Analytics)
Contour Environmental and Agricultural Consulting	Local Government Association of South Australia	Tatiara District Council
Coopers of Mt Pleasant Farm Supplies	MacKillop Farm Management Group (MFMG) Incorporated	The Agricultural Bureau of South Australia Incorporated
Coorong District Council	Mallee Sustainable Farming Inc.	The UniHub Spencer Gulf Inc. (Training)
Crop Science Society of SA Incorporated	Meat & Livestock Australia (MLA) Limited	The University of South Australia
Department of Primary Industries and Regions SA	Mid North High Rainfall Zone Group	Trengove Consulting
Elders Rural Services Australia Limited	Murray Darling Association Inc.	University of Adelaide
Elders Rural Services Australia Limited	Murray Plains Farmers Group Incorporated	Upper North Farming Systems (UNFS) Inc.
EPAG Research	Murraylands and Riverland Landscape Board	
Eyre Peninsula Landscape Board	Naracoorte Seeds Pty Ltd	
	Ngarrindjeri Aboriginal Corporation	
	Northern and Yorke Landscape Board	

Feedback from our Partners

Naomi Scholz, Executive Officer, AIR EP

The SA Drought Hub has significantly increased the number of organisations we are collaborating with, and this is happening across more regions and projects. AIR EP has always been a collaborative organisation, but the hub has taken it to the next level.

Jem Tesoriero, Partnerships and Engagement Team Leader, Murraylands and Riverland Landscape Board

The SA Drought Hub has brought highly valued resourcing, technical expertise, and networks to support a large partnership project between First Nations, landscape boards, NGOs, community groups, an industry group and universities.

Visit the hub website for more on our work to build drought resilience





Australian Government
Department of Agriculture,
Fisheries and Forestry



Future
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**SA
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sadroughthub.com.au

SOUTH AUSTRALIAN DROUGHT RESILIENCE ADOPTION AND INNOVATION HUB

Contact the hub at sadroughthub@adelaide.edu.au



Follow the @SADroughtHub social pages for information on activities, workshops and opportunities.