Australian Government
Department of Agriculture, Fisheries and Forestry

Future Drought Fund

SA DROUGHT HUB

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Hub collaboration: Developing capacity in grains research via intern impact

Regional Internships at AIR EP & Hart Field-Site Group

LEAD ORGANISATION: Hart Field-Site Group / AIR EP

PARTNER ORGANISATION: South Australian Research and Development Institute

FUNDERS: SA Drought Hub and the South Australian Grains Industry Trust

SA DROUGHT HUB NODE:Roseworthy / Minnipa

Outcomes

Short term

- Co-design and participatory approaches embedded in the design and delivery of Hub activities
- Hubs seen and utilised as key regionally focused institutions for defining and delivering research, development, extension, adoption and commercialisation (RDEA&C) services (relating to drought resilience)
- Efficient and effective activities to support RDEA&C and uptake by end users

Medium term

- Increased adoption and commercialisation of drought-resilience technologies and practices
- Technologies and practices adopted are effective in improving drought resilience
- Design and delivery of hub activities is responsive to end-user needs.

Project activites

The South Australian Grains Industry Trust and the SA Drought Hub have, since 2021, partnered to co-invest and support the Regional Internship in Applied Grains Research program (the Regional Internship Program), which helps build capacity and resilience in the South Australian grains industry.

In South Australia there are two internship programs being run, with demonstrated success at attracting and retaining skills in the regions. The Regional Internship in Applied Grains Research is offered at the Hart Field-Site Group, and the Eyre Peninsula Internship in Applied Grains Research is offered at AIR EP.

Hart Field-Site Group

The Regional Internship Program, offered since 2016, was developed by the Hart Field-Site Group, located at Hart in the Mid North of South Australia, and the South Australian Research and Development Institute (SARDI).

In 2022, it welcomed the collaborative support of the South Australian Drought Resilience Adoption and Innovation Hub (the SA Drought Hub) and the South Australian Grains Industry Trust (SAGIT).

Open to recent agricultural science graduates, the 12-month internship offers an opportunity for early-career researchers to work within the farming systems group. The successful applicant works alongside the research and extension team, relevant industry researcher partners, consultants and growers to drive, deliver and extend grains and farming systems research projects in regional South Australia.

The intern benefits from mentoring and hands-on experience in trial design and management, sampling, statistical analysis of data and written and oral communication with growers and advisers. They experience research across a wide range of areas, including drought resilience, weed management and control, soil fertility and nutrition, crop entomology, and agronomy and seeding systems.

The experience also includes spending time with SARDI researchers, based at the University of Adelaide's Waite Campus, where they utilise glasshouse and experimental infrastructure, experimental design and research.

The collaboration with SAGIT and the SA Drought Hub has added opportunities for the intern to participate in collaborative research projects, and attend industry events and workshops.

Sandy Kimber

Hart Field-Site Group

"The Hart Field-Site group developed the Regional Internship in Applied Grains Research in 2016, after recognising a gap in regional industry opportunties for early career grains researchers, particularly in regional areas.

"We wanted to establish a 12-month program linking experienced researchers to younger researchers, and provide a mentoring and training program to build skills in research, experimental design, extension, communication and management. Another significant component is networking and helping to build their build industry contacts, including important connections with local farmers.

"The program has been strategically designed to take the Intern on the journey of agricultural research, so we start with them contributing to the program's experimental design, then getting the trials in, managing the trial through the growth stages to harvest, and then results analysis and data interpretation.

"It is a hands-on role, where the intern works on site, experiences research practice and uses infrastructure, technologies and equipment.

"We've been working with some outstanding ag graduates. Our interns live, work and play in the beautiful



Clare Valley for a year and feel part of the team from the minute they arrive.

"The Hart team are thankful for the funding support received as it has allowed the program to grow and continue.

"This program is achieving impact. We are pleased to see our graduates continue their careers in grains R&D following their internship, demonstrating that we are providing a valuable career platform and attracting skills to the region."

Miffy Purslow

2024 Hart Intern



Hart 2024 intern Miffy Purslow is now five months into her internship and said it has given her the chance to build on, and continue, her learning journey in a hands-on, supportive environment.

"The beauty of working for Hart is that the role covers a wide variety of trials and provides the opportunity to work with, and network with, so many different people," she said.

"I love that it is a not-for profit organisation with a smaller community orientation, rather than a big company.

"Being able to interact directly with local growers is also something unique to the Hart internship program, and it's been great to speak with them and show them the research we're doing and how that can translate onto their own farms. I really feel that the growers value the work we are doing, and there's a real satisfaction in knowing we're making a difference to agriculture."

Kaidy Morgan

Since Febrary 2023, Kaidy has worked extensively across trial and research programs at Hart, as well as SARDI research sites, first as a Research Intern, and at the completion of that 12 month contract, was offered an ongoing position on the research team. This is the first time Hart has been able to offer a longer-term position to an intern, building the team's research and extension capacity.

Kaidy's internship experience was tailored to her interests, which included working on projects such as the joint SAGIT and SA Drought Hub funded research project 'Optimising crop establishment under dry and marginal soil moisture'.

"This project aims to improve the effectiveness of dry sowing, especially at early times of sowing. It has been interesting investigating the effects of soil moisture on crop establishment in different soil types, looking at sowing depth and rate," she said.



"The internship program gave me an exciting opportunity to be part of the research team at Hart and contribute to their research and extension projects. I have further developed my skills in agronomic management, experimental design and analysis.

"Being involved with a range of projects from start to finishhas allowed me to better understand the processes involved in experimental design and data capture across a range of projects."

AIR EP - Eyre Peninsula internship in applied grains research 2024

The Eyre Peninsula internship in applied grains research was established in 2020 in response to the region struggling to attract researchers.

Each year it engages a recent graduate to work for 12 months as an intern/trainee in applied grains research, development and extension on the Eyre Peninsula.

During these 12 months the intern gains skills in trial design, trial management, sampling, statistical analysis, general crop agronomy, extension practices including written and oral communication with growers and advisors and event delivery. They also have the opportunity to network and attend industry events such as GRDC Updates.

Originally funded via SAGIT,the SA Drought Hub has collaboratively funded the program in the last year. All three interns who have completed the program have since secured employment in the local agricultural sector.

For 2024, the intern will spend most of their 12 months working with EPAG Research, supervised and mentored by Andrew Ware. The intern will run a small research project where they design, implement, analyse and write up a field trial relevant to growers in the region.

Naomi Scholz

AIR EP Executive Officer Naomi Scholz said the program affords new agriculture graduates valuable experience, while contributing to local research and attracting skilled people into local careers.

"The program gives interns the opportunity to learn about being a grains researcher, experience different farming systems and develop their networks across the EP," Ms Scholz said.

"Interns also contribute to research across our region by identifying a suitable research question, designing and running their own trial to investigate it, analyse the results and present their findings to farmers. At the same time, they are learning about ongoing research by working alongside our research teams in on-ground trials, attending local farming and environment events, and meeting farmers and advisors to learn about local issues and opportunities to address these through research, development and extension.



"With a 100% success rate in retaining the interns in industry positions in our region, the internship program has proven invaluable for attracting skilled graduates to the EP and establishing them in ongoing careers.

"Rhaquelle Meiklejohn (the 2021 intern) now works full-time with EPAG Research as a Research Officer, Rebekah Fatchen (2022) is working with AIR EP as a Project Officer, and Elijah Luo (2023) has secured a Research Officer role with SARDI's Minnipa Agricultural Centre.

"Overall, the intern program has helped build capacity in applied grains research on the Eyre Peninsula, meaning we can better service local farmers in research and extension to help improve their profitability, productivity and resilience."

Alex Busch

Starting in February 2024 as the fourth AIR EP grains intern, Alex Busch will spend a year working on the EP. The position is funded by the SA Grains Industry Trust (SAGIT) and SA Drought Hub and offered in partnership with AIR EP and EPAG Research.

Raised on his family's sheep and cropping farm outside Saddleworth in the Mid North, Alex regards the internship is a pivotal step in his agricultural career.

He is keen to apply his Bachelor of Science, majoring in Geographical Information Systems and Soil Science, to the agriculture industry. He is also particularly interested in soil management and expanding his extension skills.

"Education and sharing of knowledge are a passion of mine, which I'm eager to share through extension work," he said.

"I'm excited to be working on the EP with the vast range of landscapes and challenges, which are significantly different from my own area. I'm looking forward to the learning opportunities that projects addressing these challenges will provide."



Malcolm Buckby

Project Manager, South Australian Grains Industry Trust



"The South Australian Grains Industry Trust has valued the partnership with SA Drought Hub. The opportunity to leverage support has meant that the program could be further expanded, and we are excited to see farming systems groups rapidly embrace this program.

"Both organisations were highly supportive of the program, as they recognise the importance of growing regional capacity and skills. We were impressed with the careful design of the program which combines skill development, and training in research, experimental design and trial management, agronomy, communication, science and extension and data analysis.

"The projects also carefully consider water use efficiency and the importance of building drought resilience, which is essential in South Australian farming systems".

"Developing and supporting programs for young people is essential so the agricultural industry has access to agronomic and science skills to drive research, innovation and extension.

"It is exciting that the program's success has gained the attention of other farming systems groups. We are now looking at getting the intern programs into other regions."

Tony Randall

Knowledge Broker, SA Drought Hub

Collaborating with SAGIT to support this program was important for the SA Drought Hub as it meant we could leverage funds and expand a program which was creating real impact.

Both SAGIT and the SA Drought Hub share strategic priorities of building skills and capacity, creating jobs in the regions and helping attract new scientists to support agricultural research and extension.

There is an identified industry need for more agronomically skilled people in the regions. This program places interns in regional areas and provides them with a base to develop skills and networks.

"It is so important to bring through the new generation of researchers so they've got a really well rounded understanding of drought-resilience and what that means to farming systems, as well as an opportunity to build resilience into farming systems," he said.

"Hart and AIR EP are wonderful groups to work with, they have exceptional networks to a wide-range of organisations – many of whom are SA Drought Hub partners – and they do a lot of work in the drought resilience space already through their field trials and workshops. "It was a really natural progression and a good fit to align with the Hart internship program."



MORE INFORMATION

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SCAN ME

The hub provides a range of factsheets on impacts and achievements. These can be found on the Hub website.

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