



2023 Western Australian Agricultural Colleges Drought Resilience and Innovation Challenge



The [South-West WA Drought Resilience Adoption and Innovation Hub](#) (SW WA Hub) aims to improve the drought resilience and preparedness of local farmers and their communities, and to foster agricultural innovation.

Led by the Grower Group Alliance (GGA), a state-wide network of more than 60 local grower groups, the SW WA Hub is driving greater innovation 'from the ground up'. Grower groups are among the SW WA Hub's more than 50 consortium partners, which represent all sectors of the WA agricultural supply chain.

This focus on collaboration, which extends to students from secondary schools and university, will enable the SW WA Hub to make agricultural research impactful and accessible, increasing innovation opportunities to meet the challenges of a changing climate.

The SW WA Hub invites all five WA Colleges of Agriculture to participate in a Drought Resilience and Innovation Challenge to investigate real-life industry issues in agriculture and to develop possible solutions.

Australian farmers are dealing with a drying and warming environment which reduces their productivity and profitability. Since 1970, rainfall from May to July over WA's South-West region (covering the entire agricultural region south of the Pilbara) has seen about 20% less than the average from 1900 to 1969. Rainfall is very likely to continue decreasing under all future climate modelling scenarios.

How can we combat the impact of drought or help farmers recover more quickly from drought?

The Challenge:

Design an innovative **tool, system or solution** that will increase future economic, environmental and social resilience of WA farmers in a hotter, drier and more variable climate.

Start by selecting an agricultural industry or a farming system in a WA region of the South-West (within the agricultural region south of the Pilbara) to focus your research and application on.

What to cover in your submission:

Weighting:

1. Background Research and Knowledge	
<ul style="list-style-type: none"> What are some of current issues relating to drought in agriculture? What does the local data tell you? How does it impact economic, environmental and social sustainability? What solutions already exist but improvements still need to be made? 	15
2. Identify a 'gap' or a problem that exists	
<ul style="list-style-type: none"> Based on your research, what is the biggest 'gap' or challenge that you feel farmers will face in a hotter, drier, and more variable climate? Provide an overview of the problem/gap you have identified Read through the Situation Analyses for the agroecological region you would like to target (links to resources are at the end of this document) and refer to the real-life Regional Priority Project ideas 	15
3. Develop an innovative tool, system or solution that may fill this 'gap'	
<ul style="list-style-type: none"> Provide a detailed overview of your solution Outline what your solution does, and what it achieves (the logic behind your solution) Showcase your creativity and innovative thinking 	20
4. Implement your solution	
<ul style="list-style-type: none"> How can you encourage farmers / industry to adopt your solution? How will you trial or implement your solution? 	20
5. Value to the Industry	
<ul style="list-style-type: none"> Explain how your solution is innovative and better than what is already out there What benefits or value to farmers and industry do you anticipate? 	15
6. Creativity of Presentation	
<ul style="list-style-type: none"> You will be graded on your creative use of media, design, use of graphics, grammar, spelling etc. 	15
Overall Weighting	100

Some existing approaches by farmers to increase resilience to climate variability include farm business management; use of data to understand risks and improve decision making; new farming practices, technologies and diversification; succession planning; and management of people and time.

Applications:

- Individuals or teams up to a maximum of three students may submit an entry
- Presentations of the solutions can include the use of social platforms such as TikTok, YouTube videos, web design, podcast, a written or live presentation. Written presentations must be 1500 words or less and face-to-face presentations not more than 10 minutes
- Be creative in how you present your solution
- The inclusion of local data is strongly encouraged
- Submissions will be judged on originality, scientific merit, value to farmers and the agricultural industry.

Timing and submissions

**Submissions for the Drought Resilience and Innovation Challenge are due:
3pm Monday September 18 (Term 3 Week 10)**

- Presentations will occur during Week 10 and will take place on school campus or via video conference.
- The assessment panel will consist of one Hub member, an industry representative nominated by the school and the Principal of the College.

Project submissions are to be directed to your school contact by the due date, all other enquiries to:

Tanya Kilminster, Knowledge Broker SW WA Hub, GGA
email: tkilminster@gga.org.au
mobile: 0427 469 038

Interschool Challenge:

The winning group from each school will showcase their solution at an event (TBC) with all participating WA Colleges of Agriculture Schools later in 2023.

The assessment panel for this inter-school challenge to judge the overall winner will consist of one Hub member, a representative from the Food Fibre and Timber Industry Training Council and a representative from the Agricultural Education Directorate at the Department of Education.

The winning solution will be showcased in the local program for the 2023 Future Drought Fund National Science to Practice Forum and presented in-person at a WA industry event (TBC).



Prize Money

Winning submissions/teams from each school will be awarded prizes to the following values:

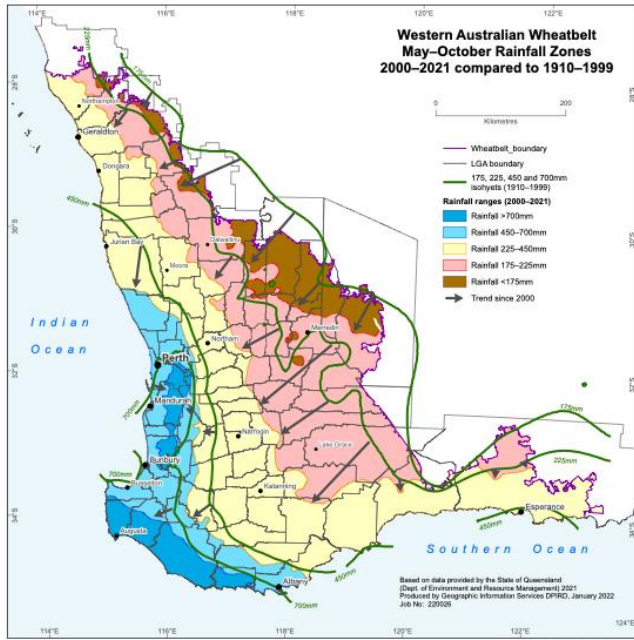
First	\$1000
Second	\$700
Third	\$300

The overall winner from the Interschool Challenge will win a further \$500 to go towards new technology for their school.



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

Links to Data



Department of Primary Industries and Regional Development

[Grower Group Alliance SW WA Drought Hub webpage](#)

[Southern Rangelands Situation Analysis](#)

[Midwest and Gascoyne Coastal Situation Analysis](#)

[Wheatbelt Situation Analysis](#)

[Southwest Situation Analysis](#)

[Regional Priority Project ideas](#)

[Farm business management](#)

[Data to understand risks and improve decision making](#)

[Farming practices](#)

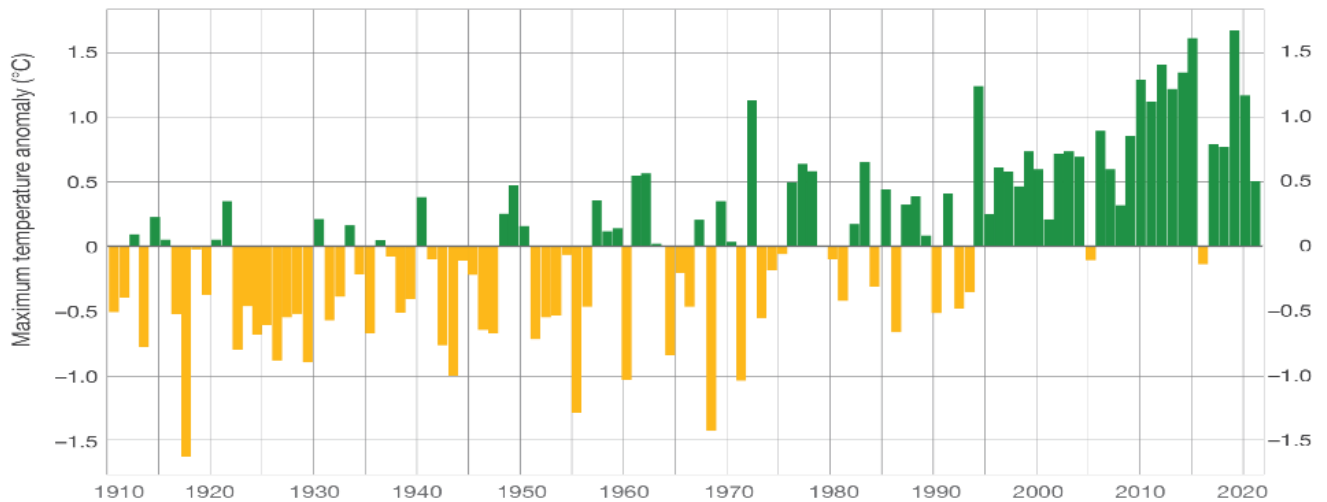
[Farm diversity](#)

[Climate Services for Agriculture](#)

[Bureau of Meteorology - Climate](#)

[Climate Kelpie](#)

Since 2000, the amount of heat during flowering and grain fill (August-October) has increased.



Department of Primary Industries and Regional Development
GOVERNMENT OF WESTERN AUSTRALIA

Planning Notes / Ideas

Background Research and Knowledge

- What are some of current issues relating to drought in agriculture?
- What does the local data tell you?
- How does it impact economic, environmental and social sustainability?
- What solutions already exist but improvements still need to be made?

Identify a 'gap' or a problem that exists

- Based on your research, what is the biggest 'gap' or challenge that you feel farmers will face in a hotter, drier, and more variable climate?
- Provide an overview of the problem/gap you have identified
- Read through the [Situation Analyses](#) for the agroecological region you would like to target (links to resources are at the end of this document) and refer to the real-life Regional Priority Project ideas

Develop an innovative tool, system or solution that may fill this 'gap'

- Provide a detailed overview of your solution
- Outline what your solution does, and how it achieves this (the logic behind your solution)
- Showcase your creativity and innovative thinking

Implement your solution

- How can you encourage farmers / industry to adopt your solution?
- How will you trial or implement your solution?

Value to the Industry

- Explain how your solution is innovative and better than what is already out there
- What benefits or value to farmers and industry do you anticipate?

Creativity of Presentation

- You will be graded on your creative use of media, design, use of graphics, grammar, spelling etc.