



## RESEARCH SUMMARY

### EP120

#### FAST FACTS

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##### PROBLEM

Fostering capacity in grains research, development and extension is essential for ongoing improvements in grain production.

##### PROJECT

Two early-career researchers were each supported through a 12 month internship, providing opportunities to work and learn alongside established professionals.

##### PARTICIPANTS

EPAG Research Trust:

Andrew Ware

2021 Intern:

Rhaquelle Meiklejohn

2022 Intern:

Rebekah Fatchen

##### DATES

Start: 1 July 2020

Finish: 30 June 2023

## EYRE PENINSULA INTERNSHIPS IN GRAINS RESEARCH

EPAG Research awarded annual grains research internships to local candidates in 2021 and 2022.

Each intern was a recent Bachelor of Science (Agriculture) or similar graduate who gained an opportunity to improve their understanding of local grains research, development and extension (RD&E) issues and grower needs, while developing their skills in planning, managing, measuring and analysing field experiments.

Each intern worked on projects that contributed needed knowledge for local growers, while building their communication skills and networks of researchers, advisors and leading growers.

#### BACKGROUND

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EP Grain Research internships provide valuable opportunities for the next generation of grains RD&E professionals to gain hands-on experience in a range of activities, build familiarity in working and communicating with growers, and build relationships with established grains research practitioners in the region.

Interns undertake real, meaningful field research projects, working alongside professionals from a number of significant organisations and local growers to build skills and contacts in a range of areas.

#### RESEARCH AIMS

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The core objectives of the project were to:

- Improve grains research, development and extension capacity in the Eyre Peninsula region.
- Develop the applied research skills of recent graduates so they can make an improved contribution to the grains RD&E sector in South Australia.

#### IN THE FIELD

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The 2021 Research Intern was Rhaquelle Meiklejohn, who worked to develop her skills in applied agronomy RD&E for the EP environment. Over the year, she attended numerous events and meetings where local issues were discussed. She also attended major events including the 2021 GRDC Update in Adelaide, Minnipa Ag Centre field day, Hart Field Day, GRDC National Grower Network Meeting on the Yorke Peninsula, Australian Brassica Conference and more, meeting and talking with many researchers from leading organisations.

Rhaquelle presented to various audiences over the year, from schools to a grower field day with more than 70 attendees. She also planned and designed trials to assess how long coleoptile wheat could be coupled

with soil moisture for deep, early sowing opportunities. Her long coleoptile work has been developed into a research paper, re-submitted for publication (with revisions) in February 2023.

For 2022, the intern was Rebekah Fatchen who also attended a wide range of meetings and events, including the GRDC Cropping After The Storm workshops and SARDI Upper Eyre Peninsula Grower Meetings covering unique local issues including an unusually wet season. Rebekah also participated in the AIR EP Innovation Tour, joining nine researchers and advisors from across Australia for four days of grower and advisor meetings.

Rebekah identified that the 2022 season offered a rare opportunity to align high yield potential with strategic nitrogen use. She designed trials to evaluate nitrogen mineralisation in different soils and assisted with site selection, soil testing, planning seeding rates and sowing trial sites – following the project through to harvest, grain quality measurement and data analysis.

Among many others, interns worked with Dr Therese McBeath and Dr Greg Rebetzke (CSIRO), Dr Steve Marcroft (Marcroft Grains Pathology), Dr Murray Unkovich (University of Adelaide) and Mark Saunders, Gary Miller, Jacob Giles and Ashley Flint (EPAG Research), Amanda Cook (SARDI) and Dr Marg Evans (private consultant).

## RESULTS

On completion of their 12 month internships, both interns assessed that the knowledge, skillset and networks they had developed had vastly accelerated their ability to contribute to the grains RD&E sector as they continued their careers.

Intern-developed projects on long coleoptile wheat and nitrogen strategies to reduce yield gap after a wet summer both contributed new knowledge for local growers and advisors.

## VALUE FOR GROWERS

Enabling and encouraging future RD&E personnel lays the foundations for continued advances in productivity, sustainability and innovation in the South Australian grains sector. Along with gaining first-hand knowledge, experience and contacts, interns are highly likely to influence and inspire peers with their experiences, providing a 'ripple effect' that extends beyond the two internships.

### MORE INFORMATION:

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Andrew Ware (EPAG Research), Rhaquelle Meiklejohn (intern 2021), Rebekah Fatchen (intern 2022) and Bryan Smith (AIR EP Board Chair).



Ted Langley (SAGIT), Bryan Smith (SAGIT), Andrew Ware (EPAG Research), Rebekah Fatchen and Andrew Polkinghorne (AIR EP).

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