



Office Use Only

Project Code	
Project Type	

FINAL REPORT 2017

Applicants must read the *SAGIT Project Funding Guidelines 2017* prior to completing this form. These guidelines can be downloaded from www.sagit.com.au

Final reports must be emailed to admin@sagit.com.au as a Microsoft Word document in the format shown **within 2 months** after the completion of the Project Term.

PROJECT CODE	:	H115
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PROJECT TITLE	(10 words maximum)
Regional internship in applied grains research	

PROJECT DURATION

*These dates **must** be the same as those stated in the Funding Agreement*

Project Start date	1 st March 2016				
Project End date	28 th February 2019 (final report due August 2018)				
SAGIT Funding Request	2014/15		2015/16		2016/17

PROJECT SUPERVISOR CONTACT DETAILS

The project supervisor is the person responsible for the overall project

Title:	First Name:	Surname:		
Dr	Sarah	Noack		
Organisation:				
Hart Field-Site Group				
Mailing address:				
Telephone:	Facsimile:	Mobile:	Email:	

ADMINISTRATION CONTACT DETAILS

The Administration Contact is the person responsible for all administrative matters relating to the project

Title:	First Name:	Surname:	
Mrs	Sandy	Kimber	
Organisation:			
Hart Field-Site Group			
Mailing address:			
Telephone:	Facsimile:	Mobile:	Email:

PROJECT REPORT

Provide clear description of the following:

Executive Summary (200 words maximum)

A few paragraphs covering what was discovered, written in a manner that is easily understood and relevant to SA growers. A number of key dot points should be included which can be used in SAGIT communication programs

It is increasingly becoming difficult to find skilled graduates interested in careers in applied grains research, development and extension (R, D & E). The annual regional internship offers graduates one-year training in applied grains R, D & E. This internship program is based in Clare region, with the Hart Field-Site Group (HFSG).

Regional interns gain skills in trial and experimental design, data collection and statistical analysis. There is also a strong emphasis on communication with growers and industry to identify issues in the region and share their own research findings. Project H115 has successfully trained two graduates in the basic skills associated with applied R, D & E ready for the next step in their career. Programs like this are important for the long-term succession of new graduates into the industry, leading to greater research capacity in SA.

Project Objectives

A concise statement of the aims of the project in outcome terms should be provided.

- To encourage high quality agricultural science students to pursue careers in applied research through a regionally based internship program.
- To give students with an interest in applied R, D & E an overview of the fundamentals of applied R, D & E relevant to the grains industry.

Overall Performance

A concise statement indicating the extent to which the Project objectives were achieved, a list of personnel who participated in the Research Project including co-operators, and any difficulties encountered and the reasons for these difficulties.

The regional internship program has achieved the following objectives outlined in the initial research proposal:

- Improving Ag graduates understanding of careers in applied grains R, D & E.
- Demonstrated there are career options available in regional areas and continued access to skill and career development opportunities.
- Provided a training / mentoring year before interns take the step from university into the next stage of their career.
- Assisted with the development of personal networks required for future employment opportunities.
- Improved graduates understanding of the diversity of jobs in research. That is, applied research positions can be based in the field and/or the laboratory and have differing emphasis on R, D & E.

Key personnel involved in the delivery of project H115 include:

- Sarah Noack and Damien Sommerville, Hart Field-Site Group
- Kathy Ophel-Keller, Jenny Davidson and Kenton Porker, SARDI
- Malcolm Buckby and Allan Mayfield, SAGIT

Key Performance Indicators (KPI)

*Please indicate whether KPI's were achieved. The KPI's **must** be the same as those stated in the Application for Funding and a brief explanation provided as to how they were achieved or why they were not achieved.*

KPI	Achieved (Y/N)	If not achieved, please state reason.
Advisory committee formed with representatives from HFSG, SARDI, SAGIT and University of Adelaide. Detailed internship program developed and 2016 internship advertised.	Y	
Mid-year meeting and reporting between the intern and advisory committee.	Y	
Advertising for 2017 internship to commence.	Y	
Evaluation of the 2016 internship.	Y	
Mid-year meeting and reporting between the intern and advisory committee.	Y	

Technical Information (Not to exceed **three** pages)

Provide sufficient data and short clear statements of outcomes.

The Hart Field-Site Group (HFSG) in conjunction with SARDI and SAGIT have been successful in delivering two regional internships as part of project H115. Below we have provided a brief summary of the activities each intern was involved in.

2016 intern – Rochelle Wheaton

- Rochelle was a BSc Ag graduate from the University of Adelaide.
- She participated in two research areas 1) nutrient stratification from chicken litter applications (working with Sean Mason, Agronomy Solutions) and 2) fungicide management for blackspot in field pea (working with Jenny Davidson, SARDI).
- These projects involved paddock sampling, analysis of soils in the lab, field trial management and a glasshouse experiment.

2017 intern – Dylan Bruce

- Dylan was a Bsc Ag graduate with first class honours in the durum breeding group at University of Adelaide.
- He had a particular interest in cereal variety evaluation and his main project aligned with Hart's long-season wheats research alongside Kenton Porker, SARDI.
- This project involved evaluation of wheat varieties in two contrasting environments at Hart and Booleroo Centre.
- The Waite component involved a small growth chamber experiment and apical dissections of wheat plants collected in field trials.



Figure 1. Regional interns Dylan Bruce (2017) and Rochelle Wheaton (2016).

Through their individual research activities, the interns had experience in a broad range of applied research skills including:

- Background research and development of a trial protocols
- Identification of suitable paddocks for field trial and/or case studies
- Trial design and setup (field, lab or glasshouse)
- Spray applications
- Soil sampling and plant assessments

- Data entry and statistical analysis
- Working with growers, advisers and researchers.

Interns beyond the program

Prior to completion Rochelle was contacted by a number of organisations interested in further employment. These included Landmark, AgXtra, UNFS and SARDI Minnipa. In the short term, Rochelle worked at SARDI Minnipa and back on-farm in a couple of tough seasons at Streaky Bay. She is currently overseas and is still deciding her fit in the grains industry. She was a very capable intern and had a preference to work in a role with a greater extension focus.

Dylan was very proactive in seeking employment. Currently he is working as a technical officer with SARDI in Clare. Dylan has expressed a strong interest in remaining in the Mid-North and furthering his skills as a researcher and longer-term as a project manager. He recently applied for a research officer role within the SARDI Clare team. This is a terrific outcome from the project and we have been fortunate to continue to work with Dylan at Hart.

Challenges

It was a challenging to fill the 2017 position compared to 2016. After advertising in November 2016, the position was offered to a candidate who applied for the SARDI based position. This candidate accepted the role however, withdrew early in the new year. Advertising recommenced in early 2017 and we were able to fill the position.

The main lesson learnt was to ensure a large range of advertising avenues are targeted. We have continued to work with University of Adelaide to ensure the third years visit Hart during the year and are familiar with our operations. In addition to this a number of honours coordinators are personally emailed to notify them of the position for finishing students. Another strategy that has been employed in 2018 was bringing the advertising date forward (August instead of November). This decision was based on feedback at the inaugural intern catch up in March, 2018 that most graduates have jobs sorted early in semester two.

Conclusions Reached &/or Discoveries Made (Not to exceed one page)

Please provide concise statement of any conclusions reached &/or discoveries made.

Working with the interns has highlighted the importance of programs like this to show graduates the diversity of careers in applied grains R, D & E. During their graduate degree they are exposed to a range of researchers within the University however, in SA we have a range of options which interns are just not aware of until shown.

On completion of their 12 months the interns have shown they have experience and confidence in the following areas (see Appendix 1 for full exit surveys):

- Conduct trial planning and design
- Conduct trial sampling and measurements in-season
- Statistical analysis of trial data
- Written and oral communication with growers, researchers and advisers

The extension and networking opportunities have been a highlight for both interns. In particular seeing their research from start to finish and sharing relevant findings with growers.

Intellectual Property

Please provide concise statement of any intellectual property generated and potential for commercialisation.

No intellectual property was generated in this project.

Application / Communication of Results

A concise statement describing activities undertaken to communicate the results of the project to the grains industry. This should include:

- *Main findings of the project in a dot point form suitable for use in communications to farmers;*
- *A statement of potential industry impact*
- *Publications and extension articles delivered as part of the project; and,*
- *Suggested path to market for the results including barriers to adoption.*

Note that SAGIT may directly extend information from Final reports to growers. If applicable, attach a list of published material.

Hart has involved all interns in our program of events. This has included introducing speakers, presenting and facilitating question time at four main events. Both interns co-presented on the Hart Field Day along side another researcher in their field. Also, as a final conclusion to the internship both interns present key findings from their research projects at Hart's Getting the Crop in seminar.

The interns have also had many opportunities to network with growers, advisers and researchers which has raised the profile of the program. Some of these have included GRDC updates, Ag Ex Alliance Forum, Brome grass technical forum, Septoira workshop, FAR / Riverine Plains Field Day and PIRSA women in leadership.

The project has been advertised in a media release prepared by Hart on October 21, 2016 which appeared in the Stock Journal, SAGIT social media, Ag Ex Alliance and local papers. Through the Hart membership we continue to refer to the project through e-news and publications.

Not only have the interns been active members of the Hart team, but also in the wider community. Through involvement in local sporting teams the general public has become aware of the intern/program and the idea of targeting early career graduates into regional areas.

POSSIBLE FUTURE WORK

Provide possible future directions for the research arising from the project including potential for further work and partnerships.

The HFSG were aware of the projects success in the long-term succession of graduate into the research industry in SA. In 2017 the HFSG and SARDI applied to SAGIT for a three-year continuation of the project. The HFSG were successful in establishing project H117 '*Regional internship in applied grains research*' and we are currently hosting our third intern Emma Pearse. With the support of SARDI and Emma is working with Ross Ballard and Liz Farquharson and assisting with general Hart's general research program.

AUTHORISATION

Name: Sarah Noack

Position: Research & Extension Manager

Signature:

Date: 31/08/2018

Submit report via email to admin@sagit.com.au as a Microsoft Word document in the format shown ***within 2 months*** after the completion of the Project Term.

Appendix 1.

Regional Internship Exit Survey

Name: Rochelle Wheaton

Completion date: 15/03/17

1) The internship was designed to give graduates experience in grains R, D & E. Using the scales below please indicate the amount of time you spent working on and your level of confidence in completing the following tasks:

- Conduct trial planning and design

1 Limited time	2	3 Some time	4	5 A lot of time
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1 Not confident	2	3 Fairly confident	4	5 Very Confident
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- Conduct trial sampling and measurement in-season

1 Limited time	2	3 Some time	4	5 A lot of time
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1 Not confident	2	3 Fairly confident	4	5 Very Confident
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- Statistical analysis of trial data

1 Limited time	2	3 Some time	4	5 A lot of time
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1 Not confident	2	3 Fairly confident	4	5 Very Confident
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- Written and oral communication with growers, researcher and advisers

1 Limited time	2	3 Some time	4	5 A lot of time
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1 Not confident	2	3 Fairly confident	4	5 Very Confident
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2) What do you see as your biggest achievement during your internship?

My biggest achievement would be the work I did in conjunction with Sean Mason as it lead to speaking at the Field Day (big achievement) and my biggest achievement will be speaking at the upcoming Getting the Crop in Seminar.

3) Has the internship given you a better understanding of career paths in the grains R, D & E sector?

This internship definitely gave me a better understanding as I was able to collaborate and communicate with a wide range of research and industry personnel. It also introduced me to the possibility of employment with farmer based research organisations like Hart and UNFS, which I had never realised before this.

If so, how has this assisted with your long-term career interests in the grains industry?

It has given a realisation of what kind of research I would like to be involved in and where my strengths lie in order to ensure that they're included in my future career.

4) Overall, did the internship meet your expectations?

The internship met my expectations and exceeded in other aspects. I genuinely enjoyed my time working and didn't think that I would expand my network as far as I have. Even outside the grains sector by being involved in the PIRSA stepping into leadership program.

If no, what was missing from the program?

5) What could the Hart Field-Site Group do to improve the experience of future interns?

One suggestion I did have was if the intern would like to be involved in the board meetings to get a bit more of an understanding of what happens behind the scenes. They may not be interested as they're obviously after hour meetings but to put the offer out there.

Regional Internship Exit Survey

Name: Dylan Bruce

Completion date: 27/02/2018

1) The internship was designed to give graduates experience in grains R, D & E. Using the scales below please indicate the amount of time you spent working on and your level of confidence in completing the following tasks:

- Conduct trial planning and design

1 Limited time	2	3 ✓ Some time	4	5 A lot of time
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1 Not confident	2	3 Fairly confident	4 ✓	5 Very Confident
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- Conduct trial sampling and measurement in-season

1 Limited time	2	3 Some time	4 ✓	5 A lot of time
-------------------	---	----------------	-----	--------------------

1 Not confident	2	3 Fairly confident	4	5 ✓ Very Confident
--------------------	---	-----------------------	---	-----------------------

- Statistical analysis of trial data

1 Limited time	2	3 Some time	4 ✓	5 A lot of time
-------------------	---	----------------	-----	--------------------

1 Not confident	2	3 Fairly confident	4 ✓	5 Very Confident
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- Written and oral communication with growers, researcher and advisers

1 Limited time	2	3 Some time	4 ✓	5 A lot of time
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1 Not confident	2	3 Fairly confident	4 ✓	5 Very Confident
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2) What do you see as your biggest achievement during your internship?

Getting a hands-on insight into grains R, D & E and building relationships and connections within the industry that will definitely be of benefit for future employment opportunities.

3) Has the internship given you a better understanding of career paths in the grains R, D & E sector?

Yes.

If so, how has this assisted with your long-term career interests in the grains industry?

The internship has developed and increased my interests in grains R, D & E and has reassured me that this is the career pathway I want to pursue in the future.

4) Overall, did the internship meet your expectations?

Yes, exceeded them.

If no, what was missing from the program?

5) What could the Hart Field-Site Group do to improve the experience of future interns?

Would have been good to have more involvement with trial planning and design at the start of the internship, however this is difficult at the beginning of the role but could maybe be done towards the end. Would have also been good to attend board meetings to socialise with board members that interns do not see very often.