

Project Code	
Project Type	



FINAL REPORT 2014

It is recommended that applicants read the *SAGIT Project Funding Guidelines 2014* prior to completing this form. These guidelines can be downloaded from www.sagit.com.au

Final reports must be submitted 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.

PROJECT CODE : AGT114

PROJECT TITLE (10 words maximum)

Heat research study trip to North America

PROJECT DURATION

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

Project Start date	
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Project End date	
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PROJECT SUPERVISOR CONTACT DETAILS

The project supervisor is the person responsible for the overall project

Title: Mr	First Name: Paul	Surname: Telfer	
Organisation: Australian Grain Technologies			
Mailing address: Perkins Building, Roseworthy Campus, Roseworthy, SA 5371			
Telephone:	Facsimile:	Mobile:	E-mail:

ADMINISTRATION CONTACT DETAILS

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

Title: Mr	First Name: Andrew	Surname: Cecil	
Organisation: Australian Grain Technologies			
Mailing address:			
Telephone:	Facsimile:	Mobile:	E-mail:

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

This study trip to North America, included visits to three research groups. These were, Dirk Hays at Texas A&M University, Limagrain Cereal Seeds (LCS) in Colorado and to the CIMMYT research centre at Obregon in Mexico.

This study trip provided significant networking opportunities, to learn from leading researchers and to gain greater awareness and appreciation of agriculture, wheat physiology research and wheat breeding in another environment and climate, similar yet contrasting to that of Australia.

A future research collaboration with Dirk Hays, a heat and drought researcher from Texas A&M University, is likely, allowing comparison of results identified under controlled environment conditions to be compared form two mapping populations with Halberd as the concurrent parent.

Visiting LCS provided opportunities to meet people at all levels of the company providing insights into both technical and breeding perspectives, the role of heat stress in the US environment and how breeding for adaptation is approached.

The CIMMYT experience was very eye opening, and was a great opportunity to see this world renowned research and breeding institute. Meeting with the researchers and seeing how the centre is operated was very interesting.

In all it was a great experience and many thanks go to SAGIT for making this trip possible.

Project Objectives

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

AGT currently run the SAGIT funded project titled: Genetic Characterisation and Exploitation of Heat Stress Tolerant Wheat Germplasm. Project no. AGT 031. This project is being managed by Paul Telfer, who has recently commenced a PhD with the University of Adelaide.

The primary objective of the travel is a study and industry networking opportunity for Paul, to gain experience from industry leaders in the research area and to build collaboration opportunities. This will benefit the remainder of the current SAGIT funded heat project, future research opportunities, and Paul's PhD.

Visits have been planned to target industry leaders in heat research as well as abiotic stresses in general. To provide exposure to leading research in genetic dissection and analysis of stresses within wheat, germplasm development, and breeding,

Outcomes:

1. Gain experience and knowledge of research methods and genetic analysis to directly benefit the SAGIT funded heat project, and Paul's PhD studies.
2. Develop industry and research linkages to value add to current and future projects.

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 objects of this trip were achieved. A number of meetings were arranged with researchers in the area of abiotic stress, as well as with wheat breeders, where improved adaptation including to heat stress is important. This created great opportunities to network and make contacts, which will be interesting and beneficial to future research and study outputs.

As well as meeting with researchers it was a great experience to see the renowned CIMMYT research centre at Obregon, as well as gaining a greater awareness of agriculture systems and how production and plant types interact with the environment.

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.

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

Provide sufficient data and short clear statements of outcomes.

See attached document "SAGIT final report technical information".

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

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

NA

Intellectual Property

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

NA

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.

As this was networking and study trip rather than a research project, there are no outcomes that specifically need to be communicated to industry. However, undoubtedly the knowledge and experience has added value to the knowledge that I have and will be incorporated into the extension work that I am engaged with within the SAGIT funded project, within AGT and my PhD studies.

Potentially in the future, linkages with other researchers will be formed that will lead to research outcomes that will directly add value to industry or further research.

POSSIBLE FUTURE WORK

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

In the short term, a collaboration with Dirk Hays of Texas A&M University is likely to compare QTL mapping results from populations with a common parent of Halberd, as AGT finishes is analysis of the Halberd Kennedy in the heat assay and associated genotyping.

After meeting with breeders at LCS, they were interested in keeping the communication channels open for potential information that may be of benefit to them. They also suggested germplasm that may be of interest to our research and this germplasm exchange is currently underway.

AUTHORISATION
Name: Paul Telfer
Position: Research Officer
Signature:
Date: 31/7/14

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.