Australian Government
Cotton Research and Development Corporation

FINAL REPORT 2014/2015

Part 1 - Summary Details

Please use your TAB key to complete Parts 1 & 2.

CRDC Project Number: **CGA1509**

Project Title: Upgrade to local weather station network and Darling Downs Grower of the Year Field Day.

Project Commencement Date: 01/01/2015 **Project Completion Date:** 30/06/2015

Part 2 – Contact Details

Administrator: Sandy Cowell (Secretary of DDCGI)

Organisation: Darling Downs Cotton Growers Incorporated

Postal Address: PO Box 114 Dalby Qld 4405

Ph: 0427 430 966 **Fax:** **E-mail:** secretary@ddcgi.com.au

Part 3 – Final Report

Background

1. Outline the background to the project.

The Darling Downs Cotton Growers Incorporated (DDCGI), as well as individual growers, established a series of 21 weather stations across the region over the period 1996-1998. The weather stations are means of providing growers with localised weather information to assist in farm management operations. The DDCGI has maintained these over this period and has recently commenced another upgrade on the stations to convert them from analogue to digital. This upgrade enables text communication with growers rather than voice in the old analogue system. To date 11 stations have been upgraded by the DDCGI.

The Darling Downs holds an annual grower of the year field day to showcase our local grower of the year and to provide information to growers on a range of topics.

Objectives

2. List the project objectives (from the application) and the extent to which these have been achieved.

The upgraded weather stations have improved the communication of weather data to growers at critical times. They are now able to receive text messages, either a one off text or continuously over a period, while conducting spray applications. There is an increased ability for the growers across the Downs to have accurate real time weather data and to make better informed decisions about when to spray. This information is improving local practices and knowledge of local weather variability. The benefits from the upgraded weather stations will continue into the future and beyond the life of this

project. Long-term weather data can also be used to demonstrate local and seasonal variability in weather conditions.

The Darling Downs Grower of the Year Field Day was a huge success with 160 people in attendance. The field day covered innovation in irrigation, maximising water use efficiency in flood systems, nutrition and compaction. The feedback on the content of the field day was very positive

Methods

3. Detail the methodology and justify the methodology used. Include any discoveries in methods that may benefit other related projects.

Equipment was purchased and four weather stations (Brookstead, Millmerran, Bowenville & Alderton) were upgraded to the digital network. The work was undertaken by Landmark Dalby and Murray Boshammer was responsible for overseeing the project.

The Grower of the Year Field Day was held on the 4th February 2015. Attendees were rotated between four sites with presentations at each which discussed the following: Overhead Irrigation, Flood Irrigation, Soil Pit and Farm Energy.

Outcomes

4. Describe how the project's outputs will contribute to the planned outcomes identified in the project application. Describe the planned outcomes achieved to date.

- The Economic Benefits:

  Having accurate weather data has enhanced the ability of growers to make safer and more efficient spray applications and will contribute to a reduction in the risk of incidents of spray drift. Spraying under appropriate weather conditions increases the efficacy of applications. By increasing efficacy and reducing the potential for drift, this has economic benefits through reduced chemical costs and reduced incidents of off target movement and crop damage.

  Improved economic efficiency from increased knowledge sharing between innovative growers, industry, researchers and attendees at the field day.

- The Environmental Benefits:

  The environmental benefits will be long-term and will extend beyond the life of the project. Improving spray applications will contribute to the environment through reducing the risks of off target movement of pesticides. The Darling Downs is a densely populated area with small land holdings; therefore, the risk of pesticides affecting the environment, crops, livestock, and humans is increased. It is critical that this important cotton production area maintain high standards of environmental responsibility and seek out ways for continuous improvement. Up grading the weather stations is a positive way for the industry to contribute to stewardship of the environment.

  The field day has provided growers with a variety of up to date information on irrigation, maximising water use efficiency from flood irrigation, nutrition and compaction. These topics all relate directly to environmental benefits by improving practices. The feedback from the survey indicated that all of the participants were able to identify things they could improve straight away or found ideas to consider on their farm.

- The Social Benefits will be:

  The weather station network across the Darling Downs is a well-known and respected reliable source of information for growers. Having live local weather data for spray

decisions is a valuable tool when assessing the risk of off target movement and provides a higher level of confidence from the community and other farmers in the practices of Darling Downs cotton growers.

Having the Darling Downs field day has enabled growers to network, share knowledge, communicate and interact with their peers, supporting industry personnel such as banks and other sponsors. Given the extremely high rate of rural suicides, days like this are critical for farmers. They benefit from the social interaction and having opportunities to meet with their friends and peers who understand and share the same challenges.

5. Please report on any:-

a) Feedback forms used and what the results were
b) The highlights for participants or key learnings achieved
c) The number of people participating and any comments on level of participation

No survey was conducted regarding the use of the weather stations.

There were about 160 people attended the field day. An online survey (Survey Monkey) was distributed to field day attendees. The results indicated the following:-

- 57% of people were able to identify things they could improve straight away
- 43% of people found ideas to consider on their farm
- 60% of people found the soil pit the most interesting

Budget

6. Describe how the project's budget was spent in comparison with the application budget. Outline any changes and provide justification.

The budget was spent in accordance with the application: $9,000 on upgrading the weather stations and $1,000 towards the Darling Downs Grower of the Year Field Day.

Conclusion

7. Provide an assessment of the likely impact of the results and conclusions of the research project for the cotton industry. What are the take home messages?

The upgrades to the Darling Downs weather stations have had a significant impact on the efficiency for growers accessing weather data. In addition to it assists growers in meeting their legislative obligations in relation to responsible chemical use. Have effective and efficient processes in place demonstrates the willingness of the cotton industry to not only promote but implement good practices.

The field day was an effective way to communicate with growers and industry to share ideas and new practices that they might consider to improve efficiencies in their operation.

Extension Opportunities

8. Detail a plan for the activities or other steps that may be taken:
   (a) To tell other CGAs/growers/regions about your project.
   (b) To keep in touch with participants.
   (c) For future projects.

A future project will provide extension days focusing on spray drift management for local growers where data from the weather stations will be used as part of these extension days. Darling Downs growers will be given examples of real weather data from their area and taught how to identify the patterns and danger times for spraying.