



Australian Government

Cotton Research and
Development Corporation

CGA FINAL REPORT

Part 1 - Summary Details

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

CRDC Project Number: CGA1708

CGA Darling Downs Cotton Growers Inc (DDCGI)

Project Title: Upgrade to Darling Downs weather station network

Project Commencement Date: 01/07/2016 **Project Completion Date:** 30/09/2017

Part 2 – Contact Details

Administrator: Sandy Cowell – Secretary - DDCGI

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Part 3 – Final Report

Background

1. Outline the background to the project.

Weather Station Upgrades: The Darling Downs Cotton Growers Inc (DDCGI), and individual growers established 21 weather stations between the period 1996-1998, to provide growers with localised weather information to assist with on-farm management operations. The DDCGI has maintained these stations over this period, and are now transitioning to a web based platform (OzForecast). This grant has enabled all stations to be upgraded by the DDCGI to the current platform which provides better access to all users at a significantly reduced cost.

Objectives

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

Weather Station Upgrades: Upgraded weather stations has improved the communication of weather information to growers at critical times. This has enhanced the ability of growers across the Downs to have accurate real time weather data for spray applications and will enable them to make informed decisions about when to spray and when to stop spraying, improving local knowledge and practices. The benefits from upgrading weather stations will continue into the future and beyond the life of this project. Long-term weather data can be used to demonstrate local and seasonal variability.

Methods

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

Weather Station upgrades –

- A 3 month demo unit was installed and used to test access and quality of data and to gather feedback from growers.
- Campbells Scientific was contracted to design computer program for the conversion of the 13 text based stations.
- A new program was installed on one station as a test. Once validated the system was rolled out on all other stations.
- Hardware was ordered and installed to upgrade the dial up stations.
- Installation of all hardware and programs so that all 22 stations are now accessed via OzForecast.

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.

Weather Station Upgrades:

1. Economic Benefits

Having accurate real time weather data has improved the ability of growers to make safer and more efficient spray applications, monitor farm rainfall, and will contribute to the promotion of best practice spray application. This will benefit the local cotton industry by reducing input losses, increasing efficacy, and protection of other crops.

2. Environmental Benefits

The environmental benefits will be short and 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 to waterways and vegetation. 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. Upgrading the weather stations to the current system is a positive way for the industry to contribute to stewardship of the environment and promote responsible and sustainable chemical use practices.

3. Social Benefits

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. The DDCGI is a respected entity in the local community. This has been achieved by ensuring a high level of proactive and beneficial engagement and demonstration of best practice.

5. Please report on any:-

- a) Feedback forms used and what the results were** – no feedback forms were used. Feedback was obtained via direct contact with long-term key users of the weather stations.

- b) **The highlights for participants or key learnings achieved** – verbal feedback received has been very positive and sits well with modern farming technologies.
- c) **The number of people participating and any comments on level of participation** – we have no data to indicate the number of people accessing the weather data. DDCGI has made this live data available to everyone. Historical data is only for members.

Conclusion

6. 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?

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

Extension Opportunities

7. Detail a plan for the activities or other steps that may be taken:

- (a) **To tell other CGAs/growers/regions about your project** – OzForecast has also worked with other cotton growing regions to roll out similar platforms.
- (b) **To keep in touch with participants** – Updates to members were regularly communicated to DDCGI members at meetings and via email. Completion of the project including how to access the weather data, was provided via email and the DDCGI facebook page.
- (c) **For future projects** – At this stage DDCGI has no plans to expand or change the current updated system. Future projects will focus on other areas for capacity building.