



Australian Government

Cotton Research and  
Development Corporation

# CGA FINAL REPORT

## ***Part 1 - Summary Details***

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

**CRDC Project Number:** CGA1804

**Project Title:** Dawson Valley CGA: Implementing Innovative Irrigation - CQ Style

**Project Commencement Date:** 08/11/2017 **Project Completion Date:** 23/01/2018

## ***Part 2 – Contact Details***

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## ***Part 3 – Final Report***

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### ***Background***

#### **1. Outline the background to the project.**

This project assisted members of the Dawson Valley Cotton Growers to attend AGTECH CH17 on Wednesday 8<sup>th</sup> November 2017, stay over in Emerald for the evening to then participate in the CHCGI organised field day the following day. The aim of AGTECH was to gain exposure to the future of technology in farming and irrigation. The field day that was held on the following day allowed growers to visit on farm and see irrigation solutions that have been implemented on farm. Growers reluctance to adopt new technologies could be overcome by visiting early adopters and listening to their first hand practical experience of irrigation innovations.

Due to on-farm commitments at the time of AGTECH, the number of DVCGA members attending was reduced. This resulted in an underspend of the approved funding. A variation was sought to extend the Project to include a one-day, local 'Sticky Beak Tour' to be held in January 2018. This variation was approved and the 'Sticky Beak Tour' was undertaken on the 23 January 2018.

## ***Objectives***

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

- i. Broaden grower perspective on irrigation tools – exposure on two farms of bankless irrigation systems, undertaken slightly differently in each case; and Pipe Through Bank system highlighted the potential for relatively simple and cost effective alternative irrigation methods.

The extension of the project to include the Sticky Beak Tour enabled Dawson and Callide Valley cotton growers to view, first hand the broad scale irrigation systems being developed on 'Macander', a local grazing property that is being redeveloped for irrigated cotton. Strategies discussed as part of the tour included water conservation, application and pump efficiencies.

The Sticky Beak Tour also provided local growers with the opportunity to liaise with a returning cotton producer and to view the establishment methodology and irrigation systems of cropping land returning to cotton production.

- ii. Networking, peer support and mentoring from growers who have implemented new technologies – All farms provided the opportunity for growers to speak with those directly responsible for the decision making and those responsible for the implementation, providing honest, first-hand experiences of the transition to the alternative irrigation methods.

The Sticky Beak Tour enabled those growers who were unable to attend November 2017 Emerald tour, to benefit from the networking that is a result of like-minded people discussing and sharing experiences and information whilst in a stimulating environment. The opportunity to informally discuss crop issues with representatives from CottonInfo, Queensland Cotton, Cotton Australia, Monsanto, CRDC and CSD was invaluable.

- iii. Exposure to two accredited myBMP farms – the farms chosen for the Field Day showcased the best of what the local cotton industry had to offer and the inclusion of the myBMP information session provided avenues of assistance to those that have not already undertaken myBMP.

The Sticky Beak Tour included one long-term myBMP farm and one currently undertaking the myBMP certification process. This enabled those considering myBMP certification to obtain first hand feedback on the process and the benefits of certification. The opportunity to discuss the requirements and benefits of BCI inclusion with the local merchants (Queensland Cotton) was also of great benefit.

- iv. Networking Between CHCG&I & Dawson Valley Growers – this was undertaken during both days of the visit to the Emerald region, first at AgTECH and then at the field day. Growers were able to mix freely between the buses and/or at the farm stops and a combined dinner on the Wednesday evening provided ample opportunity for networking and discussion.

It was heartening for the Dawson cotton growers to welcome Callide and Central Highland growers on the Sticky Beak Tour, which continued to strengthen the knowledge sharing between our areas.

### ***Methods***

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

The ability to provide the Dawson Valley Cotton Growers with two days away from their properties and the increasing workload at this busy time was invaluable in ensuring that all who attended could concentrate on both the exposure provided at AGTECH CH17 and the Field Days; and the opportunity to network with like minded growers who face both similar and different issues.

These benefits were multiplied when the DVCGA followed up with the local Sticky Beak Tour, enabling the majority of local cotton growers to attend, spending the day viewing developing irrigation systems and cotton trials whilst interacting with other like-minded people.

### ***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 projects outputs were:**

- ✓ Knowledge on irrigation systems in local area –

Visiting three local cotton farms – one returning to cotton; one with new broad scale irrigation systems; and one a very established, successful, traditional irrigation farm; enabled the participants of the Sticky Beak Tour to revisit their own irrigation systems and discuss options on-site with peers.

- ✓ Crop Management for different irrigation systems.

- ✓ Knowledge of current and developing on-farm technologies

Through the exposure to the different irrigation systems in the local area, including bankless and PTB; and coverage provided by AGTECH17 which included drones, smart systems and big data, growers dramatically increased their

knowledge of the potential for affordable practice change which will undoubtedly result in:

- Increased irrigation water use efficiency (industry benefit)
- Future efficiencies through the adaption of technology (industry benefit)
- Potential future financial savings and potential increased income due to irrigation efficiencies (economic benefit)
- Improved nutrient management under different irrigation systems.

✓ Networking

The opportunities to network with both the growers directly involved in the innovative irrigation, other cotton growers and industry service providers as well as the futurists at AGTECH17 will pay dividends in the future with potential collaboration or mentoring (formal or informal) relationships being developed (social benefits) ; or simply first hand information provision.

The networking also provided the opportunity for increased exposure to the benefits, both individual and to the industry of participation in the myBMP program as well as knowledge of the assistance that can be provided.

These benefits continued to be seen during January's 'Sticky Beak Tour'.

**5. Please report on any:-**

- a) Feedback forms used and what the results were
- b) The highlights for participants or key learnings achieved

A highlight of the participation in the Implementing Innovative Irrigation – CQ Style was the exposure to the bankless irrigation system and the Pipe Through Bank system and the first hand experiences of those that have implemented it. Whilst it may seem daunting to convert to bankless or PTB systems, the visit highlighted that the cost of implementation can be managed and the transition can pay long term dividends in labour and time management.

The viewing of the irrigation systems at 'Macander' as part of the Sticky Beak Tour was of particular interest to local channel irrigators, given the potential transition of the local channel irrigation scheme to local ownership and subsequent modernisation utilising similar pumping systems.

- c) The number of people participating and any comments on level of participation

Six members of the Dawson Valley Cotton Growers Association were able to attend the two day visit. Interest was originally shown by 12 DVCGA members however timing of rain the resultant hectic farm schedules resulted in half of the participants withdrawing within 24 hours of departure.

Twenty-four local growers and industry representatives attended the Sticky Beak Tour, maximising the opportunities for discussion and networking.

### ***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 major outcome of the Implementing Innovative Irrigation – CQ Style is the exposure of growers to the bankless irrigation systems, previously the realm of rice growers. The ability to speak with those who have implemented these systems first hand was invaluable.

Attendees concluded that bankless or PTB irrigation systems could have long term benefits for their individual farms with potential savings in water and labour.

The take-home message for all is that, in addition to the technological innovation in machinery that most growers adopt, there are many opportunities for innovation in on-farm practices and that these should be explored.

### ***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.  
Submission of an article to Cotton Australia's Cotton Matters

(b) To keep in touch with participants.  
Through DVCGA membership emails

(c) For future projects.  
To progress additional, future networking opportunities with Emerald based cotton growers, both in their locality and the Dawson Valley and further afield.