

**Project ID: GVIA2301**

Louise Gall

CottonInfo Irrigation Technical Lead

**Organisation:** Gwydir Valley Irrigators Association Incorporated

**Due:** 30 September 2025

## Final Report

**Confidential or for public release?**

Public Release

**Recognition of support:** Edit the text provided and add additional funding partners and research collaborators.

:

The GVIA acknowledges the financial support of the Cotton Research and Development Corporation

### Research Questions & Project Milestone Updates

1. Lead the extension activities associated with irrigation best management practice			
#	Description	Performance Indicator	Start - End
1.1	Irrigation best management practice demonstrations are included in regional CottonInfo Annual operating plan	Best management practice is extended and adopted more broadly by industry	1/07/23 - 30/06/25
<i>Created: 23 November 2022   Report: 102 - Progress Report</i> <b>Progress Update</b>   Status: Partially Achieved Irrigation best management practice is starting to be discussed but we need to support better extension of the value proposition to growers.			
Milestone Status: Accepted?: Locked?:			
<i>Created: 26 May 2023   Report: 105 - Progress Report</i> <b>Progress Update</b>   Status: Partially Achieved Irrigation best management practice is difficult as so often the person actually running irrigation events does not understand the need to optimise irrigations or the factors influencing Water use efficiency. While the industry is reliant on casual staff it will be very difficult to address this. Supporting the industry to find more efficient irrigation approaches such as automation of siphon-less systems, and activities such as head talks can help,			
Milestone Status: Accepted?: Locked?:			
<i>Created: 3 November 2023   Report: 103 - Progress Report</i> <b>Progress Update</b>   Status: Partially Achieved Planning irrigation best management field visits to bring irrigation managers up to date. Planning ongoing demonstration of measuring and monitoring head height and water advance in field. Supporting Growers with irrigation field day and farm visits in January. Supporting Macquarie irrigating red soils grassroots grant in November. Planning sessions in Gwydir for December.			
Milestone Status: Green			
Accepted?: Yes Locked?:			

Created: 22 May 2024 | Report: 106 - Progress Report

**Progress Update** | Status: Partially Achieved

Supported the ongoing demonstration of measuring and monitoring head height and water advance in field.

Planned irrigation best management field visits to bring irrigation managers up to date, both cancelled due to weather of time commitments of irrigators.

Encouraged the need for benchmarking performance. Linked this with the trend for increasing siphon-less and bankless irrigation systems. These can be more difficult to measure on a field basis, so limited to a farm basis currently. Supported grower interaction so they can openly discuss what they have learned, so other growers avoid any pitfall, and embrace success stories.

Milestone Status: Green

Accepted?: Yes

Locked?: No

Created: 28 November 2024 | Report: 104 - Progress Report

**Progress Update** | Status: Partially Achieved

Continued the assessment of the siphon-less irrigation trend. Case studies considered efficiencies in water, machinery and labour. Also investigated economics of changes.

Investigation of needs of producers in NT and WA. Supported the development of System Capacity case study, additional siphon-less case studies and proposed possible options to improve irrigation performance in the Ord.

Milestone Status: Green

Accepted?: Yes

Locked?: No

Created: 2 September 2025 | Report: 90 - Final Report

**Final Update** | Status: Achieved

Continue to ensure REO's have access to up to date information. Support new REO's on irrigation and WUE.

Ensure growers making system changes have detailed discussions with designers so they get what will fit their management and farm resources, and that they include their consultants in the discussions.

We still need to find low cost automation options. Ideally open source so that existing tools and technologies can be implemented.

Milestone Status: Green

Accepted?: Yes

Locked?: Yes

1.2	MyBMP water module is updated biannually	MyBMP water module incorporates new technology and management practices REO's assist growers to maintain best management practice in a changing environment	1/07/23 - 30/06/24
-----	--	--	--------------------

Created: 23 November 2022 | Report: 102 - Progress Report

**Progress Update** | Status: Not Started

Discussions on overview of MyBMP water module are ongoing. Further updates are necessary for WA, most updates have been made for NT.

Milestone Status:

Accepted?:

Locked?:

Created: 26 May 2023 | Report: 105 - Progress Report

**Progress Update** | Status: Partially Achieved

Monitoring policy changes in NT and WA to enable updates to the water module. Looking to push for overview of the module layout in next 12 months. Meetings scheduled in next few weeks to fast track this.

Milestone Status:

Accepted?:

Locked?:

Created: 3 November 2023 | Report: 103 - Progress Report

**Progress Update** | Status: Partially Achieved

Making progress with updates. Floodplain Harvesting updates now included and NT and WA requirements nearing completion. All links being cross checked.

Milestone Status: Green

Accepted?: Yes

Locked?:

*Created: 22 May 2024 | Report: 106 - Progress Report*

**Final Update** | Status: Achieved

Reviewed the MyBMP water module again, checked accuracy of new legislation and updated links for supporting information. Encouraged streamlining of module as proposed 4 years ago.

Reviewed the inclusion of fish screens as a check list item, but until data is available on performance and impacts on pumping, I suggest it not be included in the water module.

Milestone Status: Green

Accepted?: Yes

Locked?: No

*Created: 28 November 2024 | Report: 104 - Progress Report*

**Final Update** | Status: Achieved

Supported additional changes to clarify management of contaminated Agricultural water on farm.

Provided MyBMP information and support to NT Farmers to support progress in supporting NT growers to achieve MyBMP accreditation

Milestone Status: Green

Accepted?: Yes

Locked?: Yes

## 2. Support the successful adoption of irrigation research and development

#	Description	Performance Indicator	Start - End
2.1	Initiate a CottonInfo Irrigation Decision Making team workshop	CottonInfo REO's have and enhanced understanding of Irrigation Decision making and barriers to adoption of new technology Key messages on irrigation efficiency are incorporated into extension activities and material	1/07/23 - 30/06/25

*Created: 23 November 2022 | Report: 102 - Progress Report*

**Progress Update** | Status: Not Started

Irrigation decision making workshop not held yet

Milestone Status:

Accepted?:

Locked?:

*Created: 26 May 2023 | Report: 105 - Progress Report*

**Progress Update** | Status: Not Started

CottonInfo Irrigation Decision Making workshop not yet held. The CottonInfo team are extremely busy potentially consider an alternative way to support the team.

Potentially will move to host a siphon-less Irricom to encourage more discussion with research, designers and CottonInfo team.

Milestone Status:

Accepted?:

Locked?:

*Created: 3 November 2023 | Report: 103 - Progress Report*

**Progress Update** | Status: Partially Achieved

Siphon-less Irricom planning underway. Scheduled to complement CSD field day to provide growers from more regions an opportunity to be involved.

Date selected on 27th February in Narrabri. Agenda in process.

Milestone Status: Green

Accepted?: Yes

Locked?:

Created: 22 May 2024 | Report: 106 - Progress Report

**Progress Update** | Status: Partially Achieved

Workshop changed to deliver to grower needs, Held Irricom 2024 where ROEs, growers, researchers and designers discussed decisions to change irrigation system designs. This covered drivers for change, tools and technologies as well as benefits on farm.

Milestone Status: Green

Accepted?: Yes

Locked?: No

Created: 28 November 2024 | Report: 104 - Progress Report

**Progress Update** | Status: Partially Achieved

Changes to the CottonInfo REO's will mean that additional activities may be needed. Have trimmed down the AOP to enable realistic activities.

Milestone Status: Green

Accepted?: Yes

Locked?: No

Created: 2 September 2025 | Report: 90 - Final Report

**Final Update** | Status: Achieved

Irrigation decision making workshop proved too difficult to achieve with the changes to CottonInfo.

The irrigation challenges were detailed in the AOP planning sessions, these included system changes and the drivers for these changes - automation or economics.

Supported the enhanced understanding of system capacity with overhead irrigation.

Looking to complete grower case study podcast on system change to improve ROI for low capacity groundwater.

Optimisation of irrigation means different things to a researcher and a grower. The three principles are difficult to practically measure on farm to help improve performance.

Sustainability is a measure of water use per unit of product - but accurate measurement is very difficult and there is not a clear understanding of what value producers see from sustainability

Milestone Status: Green

Accepted?: Yes

Locked?: Yes

2.2	Research outcomes are demonstrated through extension and adoption activities	REO's work collaboratively with research providers to support development of adoption pathways Regional operation plans detail field activities required to support adoption of new technology	1/07/23 - 30/06/25
-----	--	---	--------------------

Created: 23 November 2022 | Report: 102 - Progress Report

**Progress Update** | Status: Partially Achieved

Engaged with REOs to enhance reach of Water productivity benchmarking.

NSW DPI Limited Water trial being well supported by Namoi REO.

Extension of SISCO in Manual siphons underway in Gwydir with REO support. Optimised Siphon-less tailwater backup trial continuing managed by REO. Further trials will be included going forward including support for optimise bankless irrigation management

Milestone Status:

Accepted?:

Locked?:

Created: 26 May 2023 | Report: 105 - Progress Report

**Progress Update** | Status: Partially Achieved

Work continues with the NSW DPI Limited water trial well supported by Namoi REO.

SISCO manual siphon trial was well supported by Gwydir REO until it finished due to hail.

Optimised siphon-less tailwater backup trial has been very well supported by St George REO.

All REO participated in the Irrigation Efficiency Benchmarking session with the NSW DPI. Many of them tried to engage growers to participate. Better follow up from the NSW DPI may have improved the outcome.

Participated in Macquarie field days and conducted Head ditch talk. Additional projects are being developed in consultation with the Macquarie REO.

AOP has been updated reflecting opportunities.

Finding more cost effective automation options which are reliable and simple will improve opportunities for improvements in WUE.

Milestone Status:

Accepted?:

Locked?:

*Created: 3 November 2023 | Report: 103 - Progress Report*

**Progress Update** | Status: Partially Achieved

Macquarie REO has organised the irrigating red soils Grassroots Grant to coincide with the soil workshops at the end of November this will be the first phase of the irrigation project.

Developed an EOI for low cost automation of existing infrastructure, still trying to determine how to fund the research idea.

Working to determine the areas of each region that has been converted to a siphon-less or bankless design to help support the Deakin University bankless and nutrition project.

Working with REO to ensure we get good grower representation at the proposed Siphon-less Irricom.

Encouraging participation in CRDC benchmarking project as much as possible

Milestone Status: Green

Accepted?: Yes

Locked?:

*Created: 22 May 2024 | Report: 106 - Progress Report*

**Progress Update** | Status: Partially Achieved

Attended Macquarie siphon-less field day where CottonInfo REO coordinated good discussion and interaction.

Successfully completed Irricom 2024 with strong support from several REO's, and good grower, researcher, designer and supplier engagement. Good feedback provided through Slido. The most important topics identified were: Data, Grower experience,

Management WUE. Detailed results attached. Event has been supported by three articles, a podcast, and several videos (still in production), there are also case studies being supported by CRDC, and a session being planned at the cotton conference. The event provided an opportunity for the CRDC cotton benchmarking team to participate to discuss the role of data.

Reviewed the case studies developed by NSW DPI on limited water irrigation including use of low-pressure drip and cover cropping.

Milestone Status: Green

Accepted?: Yes

Locked?: No

*Created: 28 November 2024 | Report: 104 - Progress Report*

**Progress Update** | Status: Partially Achieved

It is difficult for REOs to complete this, as there are no clear value propositions for ease of adoption by producers, eg SISCO still seen as too hard given growers are time poor and irrigators dont understand.

No data or feedback received from Deakin Uni project on nutrition and bankless systems. Only limited projects one in Griffith and one in Northern NSW and Southern Qld.

Milestone Status: Amber

Accepted?: Yes

Locked?: No

*Created: 2 September 2025 | Report: 90 - Final Report*

**Final Update** | Status: Achieved

Research summaries on SISCO and optimising bankless irrigation performance included in Cotton production manual under RD&E in focus.

Reviewed summaries for Limited water decision support - discussed at Research priority meetings as well.

Worked with CRDC and USQ to direct One Basin CRC evaporation projects to be relevant to cotton, looking for practical solutions.

Still need better systems to understand WUE on a field basis in both siphon and siphon-less systems.

Milestone Status: Green

Accepted?: Yes

Locked?: Yes

### 3. Support the attainment of water sustainability targets

#	Description	Performance Indicator	Start - End
3.1	Irrigation metrics of GPWUI and IWUI are understood and included in irrigation demonstrations supported by CottonInfo	-	1/07/23 - 30/06/25

*Created: 23 November 2022 | Report: 102 - Progress Report*

**Progress Update** | Status: Partially Achieved

Discussions with REO's on Water Productivity benchmarking introduced the two different metrics and discussed ways that we can discuss the value of them to growers. Intention is to work with benchmarking participants and REOs to include metrics in field trials.

Milestone Status:

Accepted?:

Locked?:

*Created: 26 May 2023 | Report: 105 - Progress Report*

**Progress Update** | Status: Partially Achieved

Some progress has been made but this is a whole of industry challenge where everyone needs to be clear about what they are talking about with WUE.

Milestone Status:

Accepted?:

Locked?:

*Created: 3 November 2023 | Report: 103 - Progress Report*

**Progress Update** | Status: Partially Achieved

Continued focus in this area. Potential for confusion when we consider some of the language used in the international sustainability programs. Maintaining open conversation with Chris Cosgrove and CRDC Water benchmarking team to unsure messaging is not confusing. Planning improvements in the Cotton Production manual.

Milestone Status: Green

Accepted?: Yes

Locked?:

*Created: 22 May 2024 | Report: 106 - Progress Report*

**Progress Update** | Status: Partially Achieved

Continue to reference the importance of measurement and monitoring, as well as encouraging proper referencing metrics. Reviewed the Cotton Production Manual water chapters to ensure consistency in definitions.

Milestone Status: Green

Accepted?: Yes

Locked?: No

*Created: 28 November 2024 | Report: 104 - Progress Report*

**Final Update** | Status: Achieved

Continue to reference importance of measurement and monitoring. Challenge is the Benchmarking report is not easily useable for producers. Still need better understanding of the value proposition of sustainability targets for growers.

Milestone Status: Green

Accepted?: Yes

Locked?: No

*Created: 2 September 2025 | Report: 90 - Final Report*

**Final Update** | Status: Achieved

Cotton Production manual continues to reference GPWUI and IWUI, trying to continue to simplify the understanding. The difficulty in measuring soil moisture content remains.

Milestone Status: Green

Accepted?: Yes

Locked?: Yes

## Communication Activities Publications

CRDC-supported researchers are required to submit materials to CRDC for review before publishing. This is to check for accuracy,

to ensure no IP or commercialisation issues, and to provide content for CRDC's Spotlight magazine. Researchers are also required to acknowledge CRDC's funding.

For more information see <https://www.crdc.com.au/publications/crdc-researchers-handbook>

Please review the list of publications connected to this project below. If the state of a publication item is in **Draft** it has not yet been submitted to CRDC for review. Publications created on this report are not submitted until you finalise submission at the Publications section. To submit a draft publication, on your dashboard at Publications/Drafts select the item and click submit.

Extension Resource		
Title	Confidentiality	Expected Release Date
Chapter 5 and 16 of Cotton Production Manual	Public Release	30 June 2023
<b>Description</b> Irrigation System choices and water budgets Irrigation Management		
<b>State: Approved</b>		

Article		
Title	Confidentiality	Expected Release Date
Getting the best from siphon-less irrigation	Public Release	1 April 2024
<b>Description</b> Australian Cotton Grower article		
<b>State: Approved</b>		

Article		
Title	Confidentiality	Expected Release Date
Focus on siphon-less irrigation at Irricom	Public Release	31 May 2024
<b>Description</b> Spotlight irricom article		
<b>State: Approved</b>		

Article		
Title	Confidentiality	Expected Release Date
Tackle Water, labour hurdles	Public Release	25 April 2024
<b>Description</b> Irricom article in Cotton & Grains outlook		
<b>State: Approved</b>		

Extension Resource		
Title	Confidentiality	Expected Release Date
Cotton Production Manual chapter 5 and chapter 14.	Public Release	30 June 2024
<b>Description</b> Review of the Irrigation chapters in the Cotton Production Manual		
<b>State: Approved</b>		

Extension Resource		
Title	Confidentiality	Expected Release Date
2024 Grower Case Study: Irrigation Conversation at Norwood	Public Release	1 August 2024

<b>Description</b> AgEcon Case study on implementation of Siphon-less designs at Norwood and Bellevue. Both are supported by video of presentation at Cotton Conference 2024		
<b>State: Approved</b>		

Extension Resource		
Title	Confidentiality	Expected Release Date
Irrigation conversion: Rice border check to beds in bays	Public Release	31 December 2024
<b>Description</b> Case study		
<b>State: Approved</b>		

Extension Resource		
Title	Confidentiality	Expected Release Date
Centre Pivot System Capacity	Public Release	31 December 2024
<b>Description</b> Simplified explanation of overhead system capacity		
<b>State: Approved</b>		

Extension Resource		
Title	Confidentiality	Expected Release Date
Pontoon v Siphon southern case study	Public Release	31 December 2024
<b>Description</b> Case study of transition from siphon to pontoon.		
<b>State: Approved</b>		

Extension Resource		
Title	Confidentiality	Expected Release Date
Chapters 5 and 14 of Cotton Production Manual	Public Release	30 June 2025
<b>Description</b> Chapter 5: Irrigation system choices and water budget Chapter 14: Irrigation Management		
<b>State: Draft</b>		

Extension Resource		
Title	Confidentiality	Expected Release Date
Grower Experience in using N-Drip to improve ROI with low yielding groundwater source	Public Release	31 October 2025
<b>Description</b> CottonInfo Podcast talking why N-drip was trialed, how it performed and the challenges the growers had.		
<b>State: Draft</b>		

I confirm that I have reviewed the Publications module and added any publications produced in the project that are not yet submitted to CRDC. I ensured to add final published versions. Yes

List proposed publications for future release. :

CottonInfo Podcast: Grower Experience in using N-Drip to improve ROI with low yielding groundwater source

Recommendations for activities or other steps that may be taken:

Irrigation Challenges next 3-5 years: Water

availability and reliability

- Water reform
  - Northern NSW connectivity
  - Changes to minimal inflow due to climate in NSW WSP ■ Basin

Plan mark 2

- Increasing variability of climate - What implication for our regions?
- Economics – ROI - Costs of access to water, Costs to make system changes (landform, infrastructure), Low cost automation ●

Labour resourcing

Measuring Water Use Efficiency

- New Siphon-less Water Balance projects in process - What do we know? ●

Sustainability implications - Access to markets?

Technology and Automation

- Evaporation mitigation - Smart sensing polymer and Floating solar ●

VariWISE - Open-source algorithms and Variable irrigation

- Remote Sensing - Water sense, Earth-based WUE benchmarking and compliance monitoring ●

Automation

- Measure to manage - What to measure? Why measure? What can we manage?

## Project Outputs and Outcomes

Instruction: Refer to CRDC Outputs & Outcomes example document to assist in completing this section.

### Project Outputs

Benchmarking Overview Nov22	
Output Type	Description
Presentations	Presentation developed for REO's to help them understand what was involved and help them encourage grower participation

  

NT Food Fibre Conference	
Output Type	Description
Presentations	Prepared slides for Adam Kay to include in his Irrigation Efficiency presentation.

  

Water Management for Irrigated Crops	
Output Type	Description
Presentations	Presentation developed for NSW DPI Climate Smart Pilots Farm Walk in Trangie. Field day cancelled due to Covid.

Cotton Production Manual	
Output Type	Description
Publications	Irrigation chapters in 2023, 2024 and 2025

  

Case studies	
Output Type	Description
Publications	Supported and reviewed case studies for Irrigation system conversion at Norwood (Dec 24), Bellevue (Dec 24), Rice border-check to beds in Bays (Jan 25), Centre pivot system capacity (Jan 25), Pontoon v Siphon (Jan 25)

  

Australian Cotton Conference Presentation 2024	
Output Type	Description
Presentations	Irrigation session at 2024 Australian Cotton Conference - Changing Irrigation systems, Design considerations, Case study discussions (Norwood and Bellevue)

  

Irricom 2024	
Output Type	Description
Presentations	Industry forum where growers, designers, researchers discussed what they need for automation, how they use tools and technologies and what challenges they see for efficiency and automation

  

articles in ag magazines	
Output Type	Description
Publications	Australian Cotton Grower: Getting the best from siphon-less irrigation April 2024 Spotlight: Focus on siphon-less irrigation at irricom - May 204 Cotton and Grains Outlook: Tackle water, labour hurdles - April 2024 Landline: Siphon-less irrigation August 2023

## Project Outcomes

Case studies	
Output Type	Description
Adoption of practices and products including behaviour change	All three Outputs increased the knowledge and helped support practice change for industry, supporting practice change to improve efficiencies

  

Australian Cotton Conference Presentation 2024	
Output Type	Description
Increased knowledge about practices and products	Attendees had improved knowledge of steps to take and cost for changes to system design.

  

Irricom 2024	
Output Type	Description
Collaboration	Bringing people together to talk about what they have, how it works, what they need, why and what challenges exist for automation of irrigation.

## Project Collaborations

Research Institute		
Collaborator/s Name	Organisation Name	Dates
Joseph Foley	USQ	1 July 2022 - 30

**Description**

Working collaboratively with USQ on trial in Tailwater backup system in St George and in SISCO manual siphon trial in Moree

Report ID: 102

Created at: 23 November 2022

**Grower/Landholder/Farming Enterprise**

Collaborator/s Name	Organisation Name	Dates
Craig Saunders	Saunders Farming	1 July 2022 - 30 November 2022

**Description**

Grower Collaborator for St George trial

Report ID: 102

Created at: 23 November 2022

**Grower/Landholder/Farming Enterprise**

Collaborator/s Name	Organisation Name	Dates
Earle and Rob Carter	AFF	1 July 2022 - 30 November 2022

**Description**

Farm Management team for SISCO manual siphon trial

Report ID: 102

Created at: 23 November 2022

**Government Organisation**

Collaborator/s Name	Organisation Name	Dates
Sarah Dadd and Malem McLeod	NSW DPI	1 July 2022 - 30 November 2022

**Description**

Water productivity Benchmarking and limited water projects

Report ID: 102

Created at: 23 November 2022

**Other**

Collaborator/s Name	Organisation Name	Dates
Glenn Lyon	GL Pty Ltd	1 July 2022 - 30 November 2022

**Description**

Partner organisation in St George tailwater backup trial

Report ID: 102

Created at: 23 November 2022

**Manufacturing/Gins/Spinners**

Collaborator/s Name	Organisation Name	Dates
Grant Oswald	Padman Automation	1 July 2022 - 30 November 2022

**Description**

Equipment supplier providing technical support and input into St George Tailwater backup trial at St George

Report ID: 102

Created at: 23 November 2022

#### Manufacturing/Gins/Spinners

Collaborator/s Name	Organisation Name	Dates
Rick Otton	EnviroNode IoT	1 July 2022 - 30 November 2022

#### Description

Automation equipment supplier providing R&M and support for SISCO manual siphon trial and Smart Siphon cut off investigation at Keytah

Report ID: 102

Created at: 23 November 2022

#### Research Institute

Collaborator/s Name	Organisation Name	Dates
Joseph Foley	USQ	1 July 2022 - 31 May 2023

#### Description

Continued working collaboratively with USQ on Tailwater backup trial in St George and SISCO Manual siphon trial in Moree. Discussed other opportunities in bankless systems and siphon systems.

Report ID: 105

Created at: 26 May 2023

#### Grower/Landholder/Farming Enterprise

Collaborator/s Name	Organisation Name	Dates
Craig Saunders	Saunders Farming	1 July 2022 - 31 May 2023

#### Description

Continued to support the Tailwater backup trial in St George

Report ID: 105

Created at: 26 May 2023

#### Grower/Landholder/Farming Enterprise

Collaborator/s Name	Organisation Name	Dates
Rob and Earl Carter	AFF	1 July 2022 - 31 May 2023

#### Description

Farm management team for SISCO manual Siphon trial

Report ID: 105

Created at: 26 May 2023

#### Consultant

Collaborator/s Name	Organisation Name	Dates
Michael Stone	ICMS	1 December 2022 - 1 March 2023

#### Description

Discussions on application of SISCO to manual siphon fields

Report ID: 105

Created at: 26 May 2023

#### Other

Collaborator/s Name	Organisation Name	Dates
Glenn Lyon	GL Pty Ltd	1 July 2022 - 31 May 2023
<b>Description</b> Collaboration and partner in the St George Tailwater backup trial		
Report ID: 105 Created at: 26 May 2023		

Research Institute		
Collaborator/s Name	Organisation Name	Dates
Malem McLeod and Sarah Dadd	NSW DPI	1 July 2022 - 31 May 2023
<b>Description</b> Supported their research projects of Limited Water and Irrigation Efficiency Benchmarking		
Report ID: 105 Created at: 26 May 2023		

Manufacturing/Gins/Spinners		
Collaborator/s Name	Organisation Name	Dates
Grant Oswald	Padman Automation	1 July 2022 - 31 March 2023
<b>Description</b> Equipment supplier providing technical support into St George Tailwater backup trial		
Report ID: 105 Created at: 26 May 2023		

Manufacturing/Gins/Spinners		
Collaborator/s Name	Organisation Name	Dates
Ric Otton	EnviroNode IoT	1 July 2022 - 31 May 2023
<b>Description</b> Equipment supplier to SISCO manual siphons and Smart Siphon management at Keytah		
Report ID: 105 Created at: 26 May 2023		

Government Organisation		
Collaborator/s Name	Organisation Name	Dates
Chris Schelfout	DPIRD	17 June 2023 - 30 June 2025
<b>Description</b> Support measuring and monitoring activities as part of the Improving water use efficiency in the Ord River Irrigation Area		
Report ID: 103 Created at: 3 November 2023		

Other		
Collaborator/s Name	Organisation Name	Dates
Hanna Leu and Dominic Calder	NT Farmers Association Inc.	1 June 2023 - 30 June 2025
<b>Description</b>		

Support for MyBMP water and Extension activities with NT Farmers FDF Drought Resilience Project.

Report ID: 103

Created at: 3 November 2023

#### Research Institute

Collaborator/s Name	Organisation Name	Dates
Joseph Foley, Simon Kelderman and Malcolm Gillies	USQ	1 June 2023 - 30 June 2025

#### Description

Working together to support demonstration and integration of technologies for water use efficiencies in Australian Cotton

Report ID: 103

Created at: 3 November 2023

#### Grower/Landholder/Farming Enterprise

Collaborator/s Name	Organisation Name	Dates
Rob Carter	Australian Food and Fibre	1 June 2022 - 30 June 2025

#### Description

Support to improve irrigation understanding of trainee managers and irrigation managers with the aim to improve WUE and adoption of tools and technologies.

Report ID: 103

Created at: 3 November 2023

#### Other

Collaborator/s Name	Organisation Name	Dates
Chris Cosgrove	sustenance Asia	1 June 2022 - 30 June 2025

#### Description

Discussion and development of sustainability water metrics and indicators

Report ID: 103

Created at: 3 November 2023

#### Research Institute

Collaborator/s Name	Organisation Name	Dates
Malem McLeod, Peter Regan, Sara Dadd	NSW DPI	1 June 2022 - 30 June 2025

#### Description

Support to improve grower participation in CRDC Cotton Benchmarking project. Discussions on water measurement and metrics and sustainability targets.

Report ID: 103

Created at: 3 November 2023

#### Cotton Australia

Collaborator/s Name	Organisation Name	Dates
Nicole Scott	Cotton Australia	1 July 2023 - 31 January 2024

#### Description

MyBMP water Module updates

Report ID: 103

Created at: 3 November 2023

#### Consultant

Collaborator/s Name	Organisation Name	Dates
Cameron Corke and Matthew Shephard	IMAG Consulting	1 August 2023 - 31 October 2024

**Description**  
Improving Irrigation understanding through in field demonstrations and conversations

Report ID: 103  
Created at: 28 November 2023

#### Grower/Landholder/Farming Enterprise

Collaborator/s Name	Organisation Name	Dates
Sinclair Steel, Darren Eather, Ben Watson, Hugh Ball, Ben Kirkby et al	Growers	1 November 2023 - 30 June 2025

**Description**  
Maintain open communication to extend grower experiences through events such as field days, Irricom, case studies and the cotton Conference

Report ID: 106  
Created at: 22 May 2024

#### Other

Collaborator/s Name	Organisation Name	Dates
George Revel and Jon Welsh	AgEcon	20 May 2024 - 1 September 2024

**Description**  
Maintain open communication to ensure Siphon-less and bankless case studies are completed and reviewed.

Report ID: 106  
Created at: 22 May 2024

#### Research Institute

Collaborator/s Name	Organisation Name	Dates
Joseph Foley, Malem McLeod, Sarah Dadd	USQ, NSW DPI	1 July 2023 - 31 May 2025

**Description**  
Support researchers with site selection, case study reviews, grower participation and exposure to grower events such as Irricom 2024

Report ID: 106  
Created at: 31 May 2024

#### Government Organisation

Collaborator/s Name	Organisation Name	Dates
Dr Chris Schelfhout	WA DPIRD	1 July 2023 - 30 June 2025

**Description**  
NWANT Innovation Hub project Improving water use efficiency in Ord River Irrigation Area

Report ID: 104  
Created at: 28 November 2024

#### Grower/Landholder/Farming Enterprise

Collaborator/s Name	Organisation Name	Dates
Ben Kirkby and Hugh Ball	Noorwood	1 July 2024 - 30 June 2025
<b>Description</b> Case study		
Report ID: 90 Created at: 2 September 2025		

Grower/Landholder/Farming Enterprise		
Collaborator/s Name	Organisation Name	Dates
Darren Eather	Bellevue Ag	1 July 2024 - 30 June 2025
<b>Description</b> Case Study		
Report ID: 90 Created at: 2 September 2025		

Consultant		
Collaborator/s Name	Organisation Name	Dates
Mike Naylor	Mike Naylor	1 August 2024 - 28 February 2025
<b>Description</b> Case study		
Report ID: 90 Created at: 2 September 2025		

Consultant		
Collaborator/s Name	Organisation Name	Dates
Jon Welsh, George Revell, Janine Powel	Ag Econ	1 May 2024 - 30 June 2025
<b>Description</b> Case Studies		
Report ID: 90 Created at: 2 September 2025		

Technical Report

---

## Summary for Public Release

### Executive Summary:

CottonInfo is the Australian cotton industry's extension program that connects growers and consultants with the latest research and supports them to adopt new technologies and best practice. The CottonInfo Irrigation Technical Lead supports the Regional Extension Officers to build industry capability to make informed decisions about irrigation and water management. A recent CRDC commissioned study identified improved irrigation management as having the greatest scope for industry productivity improvement.

The Irrigation technical lead is the industry's main contact point for irrigation and water management providing support to the CottonInfo team, growers and the wider cotton industry with irrigation specific information, guidance and advice. Through partnering with irrigation research and innovative irrigation growers, the CottonInfo Irrigation technical lead draws on learning from other sectors and supports demonstrations of irrigation research and development across multiple regions.

### Objectives:

1. Being the point of contact for the cotton industry on irrigation and water management.
2. Collaboration with industry to support the adoption of automation technologies and more efficient irrigation systems.
3. Contribute to industry events supporting irrigation best management practice and current and emerging technologies.
4. Identification of irrigation RD&E challenges and opportunities.
5. Reviewing and updating current irrigation research application and industry tools including myBMP, the Australian Cotton Production Manual, videos, case studies, podcasts and other CottonInfo irrigation material.
6. Develop and support implementation of new irrigation resources (online tools, webinars, fact sheets etc.) for the cotton industry.
7. Identifying funding opportunities for REOs to deliver on farm irrigation trials and/or technology demonstrations.

### Background:

Improvements in Water Use Efficiency and irrigation optimisation has the potential to enhance the sustainability of industry. The challenge is that in many situations the irrigation team (often casual staff) may not understand how critical their role is. This is part of why industry is moving towards siphon-less irrigation, it reduces the need for casual staff and means there are improved labour resourcing, potential improvement in WUE if the new systems are designed and managed to optimise efficiency.

### Research Activities:

Initiated Irricom 2024, Designed and coordinated the Irrigation session at the 2024 Australian cotton conference, participated in field days looking at irrigation systems and irrigation design. Partnered with organisations including NT farmers and WA DPIRD to support irrigation initiatives. Participated in research priority sessions to support CRDC and growers to focus on key irrigation priorities.

### Outputs:

Annual updates to the irrigation chapters of the Cotton Production Manual, a range of case studies covering outcomes from research projects such as the Limited water project by NSW DPI, case studies looking at irrigation system changes completed by AgEcon, overhead irrigation case study by AgEcon.

### Impacts:

1. Maintained and enhanced industry capability for irrigation and water management that transitions growers to optimised irrigation management.
2. Industry irrigation and water management challenges and opportunities are more clearly defined and

growers are able to source more information to support irrigation system transitions and adoption of new thinking.

**Key Publications:**

Cotton Production Manual irrigation chapters, CottonInfo irrigation Case studies and detailed in report.