



## MAJOR CAPITAL ITEM REPORT

### Part 1 - Summary Details

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

**CRDC Project Number:** IREC1801

**Project Title:** IREC Field Station Automated Irrigation Application

**Project Commencement Date:** 30 April 2017    **Project Completion Date:** 30 April 2020

**CRDC Research Program:** 1 Farmers

### Part 2 – Contact Details

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**Signature of Research Provider Representative:**

**Date Submitted:** 1 June 2020

## Part 3– Capital Item Final Report

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### 1. Background

The 2019/20 irrigation season saw another low allocation year for general security irrigators in the Murrumbidgee Valley, with only 5% entitlement for much of the season. This saw a dramatic decrease in the area of cotton grown in the region. The main objective of this project was to enable cotton focussed research to continue in a low allocation year, through the purchase of 75ML of water. Growing 14ha of cotton has resulted in a number of research projects being able to proceed at the IREC Field Station site, and so has ensued continuity of a number of research projects.

The original project application aim was to demonstrate to growers the capabilities of an automated watering system and optimise the use of the automated irrigation system installed at the IREC Field Station by using moisture probes to automatically trigger irrigations based on probe readings. The funds were not spent on the purchase of soil moisture probes as originally intended in the 2018/19 season as soil moisture probes were installed in the cotton crop through a separate research project at the site. We thought it would be prudent to hold the purchase of probes over to the following season (2019/20). The separate project continued at the IREC Field Station so a variation to the original project was made and granted to use these funds to purchase water to enable the growing of cotton.

### 2. How does the Capital Item meet expectations and specifications?

The purchase of 75ML of water met expectations and specifications perfectly. It contributed to the volume of water IREC had and allowed us to grow and fully irrigate 14ha of cotton at the IREC Field Station.

### 3. How is the Capital Item being utilised to support your research or intended application?

The purchase of 75ML of water @ \$625/ML contributed to growing 14ha of cotton at the IREC Field Station which in turn enabled cotton focussed research to take place. Research and demonstrations taking place this season included: Long term benefits of using Animal Manure (Dr Wendy Quayle- Deakin Uni), Herbicide Demonstrations (Eric Koetz- NSW DPI, Roundup Ready X-Tend (Bayer), Zytex (Kim Russell), Sensors for Smart bankless automation (John Hornbuckle -Deakin University), Foliar Fertiliser (Omnia), My Digital Farm, and long term cotton rotation project. A number of these projects have been at the site for the past 3 years. Of particular importance is the long term rotation project allowing this block to have the 3 years of cotton to monitor the build-up soil disease and assess the potential impact on yield in southern soils. Each of the projects contributed to the purchase of this water.

### 4. Describe the benefits of this Capital Item in supporting your research?

Without this funding it would have been unfeasible to grow fully irrigated cotton at the IREC Field Station this season. While some of these projects would have found alternative locations some of them would have not occurred, and the benefits of having consistent research at the same site would also have been lost.

### 5. Are there any Extension/Communications opportunities?

Yes. We held the annual field day in January attended by around 90 people. All researchers spoke about their projects at the IREC annual field day. There were also a number of social media posts throughout the season, as well as articles in the Autumn Edition (203) of the IREC Farmers' Newsletter on the different projects.

## Part 4 – Capital Item Final Report Executive Summary

*(This will be included on CRDC's website of final reports.)*

The 2019/20 irrigation season saw another low allocation year for general security irrigators in the Murrumbidgee Valley, with only 5% entitlement for much of the season. This resulted in a dramatic decrease in the area of cotton grown in the region.

The IREC executive made a strategic decision to purchase 75ML of water and grow 14ha of irrigated cotton at the IREC Field Station to enable cotton focussed research to continue in a low allocation year. While this was not a financially beneficial decision to IREC, it was thought the benefits to IREC members, the cotton industry and our research partners of maintaining research projects at the Field Station far outweighed the possible financial negatives of this decision.

Research and demonstrations taking place at the IREC Field Station this season included: Long term benefits of using Animal Manure (Dr Wendy Quayle- Deakin University), Herbicide Demonstrations (Eric Koetz- NSW DPI), Roundup Ready X-Tend (Bayer), Zytex (Kim Russell), Sensors for Smart Bankless Automation (Dr John Hornbuckle -Deakin University), Foliar Fertiliser (Omnia), My Digital Farm, and long term cotton rotation project. A number of these projects have been at the site for the past 3 years. Of particular importance is the long term rotation project allowing this block to have the 3 years of cotton to monitor the build-up soil disease and assess the potential impact on yield in southern soils.

Approximately 90 people attended the annual IREC field day in January, where the researchers spoke about their projects.





*Please email to [research@crdc.com.au](mailto:research@crdc.com.au) with a completed financial statement within 40 Business days from purchase of Capital Item.*