



## FINAL REPORT

**CRDC ID:** CCA1901

**Project Title:** Annual consultant qualitative and quantitative surveys

**Confidential or for public release?** For Public Release

**Recognition of support:** The Research Provider Crop Consultants Australia acknowledges the financial assistance of the Cotton Research and Development Corporation in order to undertake this project.

### Part 1 – Contact Details & Submission Checklist

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#### Submission checklist.

*Please ensure all documentation has been completed and included with this final report:*

- Final report template (this document)
- Final Technical Report
- Final Schedule 2: IP register
- Final Schedule 3: Acknowledgment
- Final financial report
- PDF of all journal articles (for CRDC's records)

**Signature of Research Provider Representative:**



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**Date submitted:** \_08/02/2022\_

## Part 2 - Monitoring & Evaluation

### Achievement against milestones in the Full Research Proposal

Milestone	Achieved/ Partially Achieved/ Not Achieved	Explanation
<i>1.1 Review capacity and management of agronomic data for cotton surveys</i>	<i>Achieved</i>	<i>Please insert</i>
<i>1.2 Plan, develop and conduct qualitative and quantitative cotton surveys with crop consultants for the 2017/18 cotton season</i>	<i>Achieved</i>	<i>Please insert</i>
<i>1.3 Build capacity and management of agronomic data for cotton surveys</i>	<i>Achieved</i>	<i>Please insert</i>
<i>1.4 Qualitative Report published and Quantitative data set finalised</i>	<i>Achieved</i>	
<i>1.5 Build capacity and management of agronomic data for cotton surveys</i>	<i>Achieved</i>	
<i>1.6 Plan, develop and conduct qualitative and quantitative cotton surveys with crop consultants for the 2018/19 cotton season</i>	<i>Achieved</i>	
<i>1.7 Qualitative and Quantitative data sets provided to CRDC</i>	<i>Achieved</i>	
<i>1.8 Qualitative Report published and Quantitative data set finalised</i>	<i>Achieved</i>	
<i>1.9 Build capacity and management of agronomic data for cotton surveys</i>	<i>Achieved</i>	
<i>1.10 Plan, develop and conduct qualitative and quantitative cotton surveys with crop consultants for the 2019/20 cotton season</i>	<i>Achieved</i>	
<i>1.11 Qualitative and Quantitative data sets provided to CRDC</i>	<i>Achieved</i>	
<i>1.12 Qualitative Report published and Quantitative data set finalised</i>	<i>Achieved</i>	
<i>1.13 Plan, develop and conduct qualitative and quantitative cotton surveys with crop consultants for the 2020/21 cotton season</i>	<i>Achieved</i>	
<i>1.14 Qualitative and Quantitative data sets provided to CRDC</i>	<i>Achieved</i>	
<i>1.15 Qualitative Report published and Quantitative data set finalised</i>	<i>Achieved</i>	

Milestone	Achieved/ Partially Achieved/ Not Achieved	Explanation
<i>2.1 Review Cotton Pest Management Guide 2017/18 for technical and practical applications</i>	<i>Achieved</i>	
<i>2.2 Technical panel review of author research contributions and collation for the 2018/19 CPMG</i>	<i>Achieved</i>	
<i>2.3 Final review and edits</i>	<i>Achieved</i>	
<i>2.4 Review Cotton Pest Management Guide 2018/19 for technical and practical applications</i>	<i>Achieved</i>	
<i>2.5 Technical panel review of author research contributions and collation for the 2019/20 CPMG</i>	<i>Achieved</i>	
<i>2.6 Final review and edits</i>	<i>Achieved</i>	
<i>2.7 Review Cotton Pest Management Guide 2019/20 for technical and practical applications</i>	<i>Achieved</i>	
<i>2.8 Technical panel review of author research contributions and collation for the 2020/21 CPMG</i>	<i>Achieved</i>	
<i>2.9 Final review and edits</i>	<i>Achieved</i>	

**Outputs produced** (Please refer to examples document to assist in completing this section).

Output	Description
<i>Consultants Survey Report 2017/18</i>	<i>Report detailing the results of the 2017/18 Qualitative Survey</i>
<i>Quantitative Data Set 2017/18</i>	<i>Report detailing the results of the 2017/18 Quantitative Survey</i>
<i>Consultants Survey Report 2018/19</i>	<i>Report detailing the results of the 2018/19 Qualitative Survey</i>
<i>Quantitative Data Set 2018/19</i>	<i>Report detailing the results of the 2018/19 Quantitative Survey</i>
<i>Consultants Survey Report 2019/20</i>	<i>Report detailing the results of the 2019/20 Qualitative Survey</i>
<i>Quantitative Data Set 2019/20</i>	<i>Report detailing the results of the 2019/20 Quantitative Survey</i>
<i>Consultants Survey Report 2020/21</i>	<i>Report detailing the results of the 2020/21 Qualitative Survey</i>
<i>Quantitative Data Set 2020/21</i>	<i>Report detailing the results of the 2020/21 Quantitative Survey</i>
<i>Cotton Pest Management Guide 2018/19</i>	<i>Annual revision of the Cotton Pest Management Guide for 2018/19 season</i>

Output	Description
<i>Cotton Pest Management Guide 2019/20</i>	<i>Annual revision of the Cotton Pest Management Guide for 2019/20 season</i>
<i>Cotton Pest Management Guide 2020/21</i>	<i>Annual revision of the Cotton Pest Management Guide for 2020/21 season</i>

### Outcomes from project outputs (Refer to examples document).

Outcome	Description
<i>Reports – Quantitative and Qualitative Reports produced for four consecutive cotton seasons</i>	<i>The project has achieved its commitment to collect and provide quality quantitative and qualitative data of good geographical representation (coverage of Australia’s cotton production area) relating to economic, environmental and social factors of Australia’s cotton industry. The data collected each year and provided to CRDC is able to be compared with data from other years to determine progress on various issues and changes in management practices. The data has been utilised by industry for benchmarking and trending purposes as well as for monitoring and evaluation of research programs.</i>
<i>Extension Resources and Services – Cotton Pest Management Guide produced (three consecutive updates)</i>	<i>The project was responsible for the technical review and coordination of publication of the Cotton Pest Management Guide in the first three years of the project. This publication is a critical resource for the cotton industry that is updated on an annual basis to ensure the information remains current for users. CCA provided an effective means for reviewing the content and utility of the guide given that consultants represent a significant proportion of users.</i>

## Part 3 – Technical Report

### Executive Summary

The annual qualitative and quantitative survey project measures the impacts and outcomes of research and production critical to the Australian cotton industry. Crop Consultants Australia (CCA) has collected quantitative and qualitative data for the industry since the early 1990s. The data helps the industry to better understand the impact of research and extension, technology adoption, farming practices and product usage as well as identifying new issues and opportunities.

This project collected and provided quality quantitative and qualitative datasets of good geographical representation (coverage of Australia’s cotton production area) relating to economic, environmental and social factors of Australia’s cotton industry for the seasons 2017/18 – 2020/21. The data collected each year and provided to CRDC is able to be compared with data from other years to determine progress on various issues and changes in management practices.

The data has been utilised by industry for benchmarking and trending purposes as well as for monitoring and evaluation of research programs.

The Cotton Pest Management Guide is a highly valued resource for the cotton industry. It is updated annually to ensure that it remains relevant and that the information is up to date for users of the guide each year. Crop consultants and growers rely on the accuracy of information in the CPMG and CCA delivered a robust process of review to ensure a high-quality publication was produced for the editions included in the scope of this project.

## **Introduction**

Crop Consultants Australia has been working with its members to provide qualitative and quantitative data for the cotton industry since the early 1990's. Survey questions have been developed in conjunction with CRDC, Cotton CRC and CCA, with responses providing data about what is happening on cotton farms in different regions/valleys, in both irrigated and dryland systems and different gene traits.

Over the years the data has helped the industry tailor research, extension and communication programs including monitoring BMP initiatives. The surveys have also provided an opportunity to gain feedback on industry issues and allow emerging issues to be further investigated.

With survey questions being reviewed and developed annually the survey activities are responsive to new or emerging issues and research needs which ensures data collected continues to be relevant and meet the needs of industry.

The opportunity to collect data for different research projects through a well-coordinated, targeted survey project has proved successful. A key success factor is that this project is strongly supported by many of Australia's leading crop consultants, advisors and agronomists.

The production of the annual Cotton Pest Management Guide was coordinated by CCA for three consecutive years in this project. CCA provided an effective review of the technical content of the guide and ensured that the format was relevant and tailored to the needs of users.

## **Materials and Methods**

### ***Surveys***

#### Preparation and engage participants

Each year a review of the survey collection methodology and approach was reviewed and refined, with input from CRDC to ensure the survey remains responsive to the needs of the industry and is of a high quality. Each year the questions in the qualitative survey were developed by CRDC, in consultation with CCA and other cotton industry stakeholders and considered current and new research projects, BMP linkages, hot topics and emerging issues. Additional questions in the Cotton Consultants Survey included the Resistance in Bollgard Survey. CCA also provided CRDC with member up-skilling data on an annual basis

as well as the quarterly readership reports for the consultants e-newsletter. The data collected through the Cotton Market Audit was reviewed annually with CRDC. CCA members (being crop consultants, advisors, agronomists and reseller agronomists) committed annually to contributing data to the Survey Project. New CCA members were encouraged to participate.

#### Collection methods

CCA used CVENT to collect responses for the Cotton Consultants Survey. A number of collection methods were used for the Cotton Market Audit including excel templates, the CCA Data Management Program and by partnering with Agworld as a data service provider.

#### Participation and collection

CCA Members were encouraged to participate through direct contact, promotion at annual CCA Cropping Solutions Seminars, and the CCA newsletter. Information about participation in the surveys, including policies and procedures are located on the CCA website.

#### Collation and reporting

CCA collated the data contributed by individual members of the survey team into raw datasets and provided to CRDC in Excel spreadsheet format (with the identity of individuals removed).

#### Review

Inconsistencies in the raw data sets identified by CRDC were raised with CCA and followed-up. This ensured that the data sets were able to be used accurately in analysis.

#### Reporting

The final raw data sets were collated and submitted to CRDC. The Qualitative data was published in the Qualitative Report and published on the CRDC website with links and promotion provided through CCA.

#### Review

CCA contracted a project manager who was responsible for day-to-day coordination of project activities with the CCA Survey Director (CCA Board member) supervising the project. Financial management was overseen by the CCA Finance Director (CCA Board member). CCA's financial records are audited annually by an independent, qualified auditor.

### ***Cotton Pest Management Guide***

CCA used a panel of crop consultants to contribute to the technical review of the Cotton Pest Management Guide, and the project manager was responsible for liaising with authors, CRDC and the CottonInfo team to ensure broad industry consultation was achieved.

A preliminary review was conducted each year with the panel and CRDC to review the technical and practical aspects of the guide. Any changes to the content or focus of the guide was identified and incorporated into the plans for the new edition. The relevant contributors provided content to the new version based on this feedback and this was coordinated and reviewed by the project manager. A series of proofs were then produced and edited for technical content and layout and the production of the guide was arranged with the printer. The updated guide was published and distributed in August of each year to ensure its availability for users prior to the cotton season.

### **Results**

Participation and coverage data for the qualitative and quantitative survey are provided in the table below. The variability of coverage is largely due to the effects of drought,

particularly in those valleys that have been most impacted by water shortages. Participation was difficult in 2020/21 with a delayed crop due to late planting, followed by a busy winter crop season across most cotton valleys. Consultants were still willing to be involved but several ran out of time to get their data in to the project.

Season	Survey	Number of Participants	Industry Coverage (% of Total Ha)
2017/18	Qualitative	63	56%
	Quantitative	28	33%
2018/19	Qualitative	58	41%
	Quantitative	49	27%
2019/20	Qualitative	55	64%
	Quantitative	32	53%
2020/21	Qualitative	53	40%
	Quantitative	36	41%

## Conclusions

CCA continues to provide quality raw farm level data to the cotton industry to inform research and issues and report to the wider industry and community. CCA will work with CRDC to continually improve the surveys to meet industry requirements and build on opportunities to provide feedback to the industry on key issues. Technological advancements need be considered to ensure the project is delivered in the most appropriate way.

The coverage and extent of the surveys provides a statistically valuable representation of the practices and attitudes of practicing agronomists in the cotton industry. The likely impact of the surveys is extended through all aspects of the cotton industry by informing researchers and industry stakeholders of priority and emerging issues on farms at the regional level, management responses to issues and gaps, industry trends, and communicating performance and adoption of practices.

## List of Publications

Qualitative reports were published for the following seasons:

2017/18  
2018/19  
2019/20  
2020/21

The most recent report can be accessed at

<http://www.crdc.com.au/publications/cotton-consultants-survey>

Historical reports are available at the Inside Cotton Library:

<http://www.insidecotton.com/xmlui/discover>

Links to these online reports are included on the Crop Consultants Australia website

<https://cropconsultants.com.au/surveys>

Cotton Pest Management Guides were published for the following seasons:

2018/19

2019/20

2020/21

Hard copies were printed and distributed in August of each year, and a digital copy was available on the CottonInfo website. The latest copy of the guide can be downloaded from

<https://www.cottoninfo.com.au/publications/cotton-pest-management-guide>

(Note that the current version is the 2021/22 edition which was not produced as part of this project.)



## Part 4 – Summary for public release

<b>Project title:</b> <i>Error! Reference source not found.</i>	
<b>Project details:</b>	CRDC project ID: <b>CCA1901</b>
	CRDC goal: <i>5. Driving RD&amp;E impact (ES2)</i>
	CRDC key focus area: <i>5.1 Impact and effectiveness</i>
	Principal researcher: <i>Doug McCollum, Project Manager</i>
	Organisation: <i>Crop Consultants Australia</i>
	Start date: <i>15/03/2018</i>
	End date: <i>31/03/2022</i>
<b>Objectives</b>	<ul style="list-style-type: none"> <li><i>To provide the cotton industry with a robust set of qualitative and quantitative data each season, specifically looking at production trends and techniques, social and economic factors and providing feedback on the uptake of research programs by cotton growers</i></li> <li><i>To publish the Cotton Pest Management Guide updates ensuring up to date information and enhancing the practical application of the guide for users.</i></li> </ul>
<b>Background</b>	<i>Crop consultants are well positioned to inform industry on emerging issues and trends and are able to provide unique detail on practices across multiple farming enterprises. Crop Consultants Australia has been working with its members to provide qualitative and quantitative data for the cotton industry since the 1990s. This resource provides key data for CRDC and CottonInfo M&amp;E as well as informing RD&amp;E of emerging issues. The Cotton Pest Management Guide is a key format for communicating cotton crop protection research and best practice. Consultants are an important audience for this publication, and the involvement of CCA was sought to enhance its usability and adoption of best practice.</i>
<b>Research activities</b>	<p><i>This project collected and provided quality quantitative and qualitative datasets of good geographical representation (coverage of Australia's cotton production area) relating to economic, environmental and social factors of Australia's cotton industry for the seasons 2017/18 – 2020/21. The data collected each year and provided to CRDC is able to be compared with data from other years to determine progress on various issues and changes in management practices.</i></p> <p><i>The data has been utilised by industry for benchmarking and trending purposes as well as for monitoring and evaluation of research programs.</i></p> <p><i>The Cotton Pest Management Guide is a highly valued resource for the cotton industry. It is updated annually to ensure that it remains relevant and that the information is up to date for users of the guide each year. Crop consultants and growers rely on the accuracy of information in the CPMG and CCA delivered a robust process of review to ensure a high-quality publication was produced for the editions included in the scope of this project.</i></p>

<b>Outputs</b>	<i>Reports for the Qualitative Survey and Quantitative Survey were produced for the seasons 2017/18, 2018/19, 2019/20 and 2020/21. The Cotton Pest Management Guide updates were published for the seasons 2018/19, 2019/20 and 2020/21.</i>
<b>Impacts</b>	<i>The data collected through the annual consultants surveys informs the broader industry about trends and issues affecting the productivity, competitiveness and social licence of the cotton supply chain. Research organisations use the data to benchmark current practices and to measure the impact of past and ongoing research and extension programs. Agribusiness utilise the data to inform new market opportunities for their products and to assist with forecasting and supply chain management. Cotton growers utilise the information through industry bodies such as Cotton Australia and Cotton Growers Associations to advocate for the interests of the industry across multiple focus areas, including market access, community perceptions of the cotton industry, improvements in production and fibre quality and promotion of commercial opportunities and business opportunities that will ultimately provide benefits to growers.</i>
<b>Key publications</b>	<i>Cotton Consultants Survey (Qualitative) Report 2017/18 Cotton Consultants Survey (Qualitative) Report 2018/19 Cotton Consultants Survey (Qualitative) Report 2019/20 Cotton Consultants Survey (Qualitative) Report 2020/21 Cotton Pest Management Guide 2018/19 Cotton Pest Management Guide 2019/20 Cotton Pest Management Guide 2020/21</i>