

Senate Estimates, RRAT Committee

CRDC Briefing Pack

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Contents

Senate RRAT Committee	2
CRDC Introductory Brief	2
About CRDC	3
CRDC accountability framework	4
Cotton industry statistics	4
Forward production	4
Value	4
Sustainability metrics	4
Current key issues	5
Cotton workforce	5
Water	5

Senate RRAT Committee

Chair: Senator Glenn Sterle

Deputy Chair: Senator Matt Canavan

Committee members:

Senator Linda White

Senator Raff Ciccone

Senator Peter Whish-Wilson

Senator Gerard Rennick

CRDC Introductory Brief

Thank you, Senator Sterle.

CRDC appreciates the opportunity to be here to discuss research and development activities undertaken on behalf of the Australian cotton industry.

CRDC is a statutory research and development (R&D) corporation located in Narrabri, NSW. We are a small team of 15, with members based in Narrabri, plus Toowoomba, Goondiwindi and Emerald in QLD. Our purpose is to invest in leading research to benefit both the Australian cotton industry and Australian taxpayers. We work very closely with our representative organisation, Cotton Australia, and Australia's cotton growers, to ensure the R&D we invest in is in direct response to grower and industry needs.

The cotton industry is enormously valuable to the Australian economy, and CRDC's role is to help the industry grow sustainably: balancing social impact, environmental benefit and economic growth.

Historically, cotton was grown in northern NSW and south-east and central QLD. More recently, due to varietal improvements and agronomic practices, the industry has expanded into southern NSW, north QLD, the NT and northwest WA. In the northern regions, cotton is not only valued for its lint, but also for its seed which has a high protein and oil content and is a valuable feedstock for livestock.

In part due to a culture of innovation and adoption of R&D, Australian cotton growers are recognised as world leaders producing some of the highest yields and highest quality cotton globally. Last year the industry produced 5.5 million bales of cotton and 2 million tonnes of cottonseed, the largest crop on record. Indonesia, India, Vietnam Bangladesh, Pakistan and Turkey are key customers.

This year, the industry is facing a difficult season. This third *La Niña* weather event and resulting widespread flooding is impacting both the harvesting of winter cereals and planting of summer crops including cotton. As most, if not all, cotton growers also produce other crops and livestock, this is having a compounding effect.

The impact of wet conditions is forecast to reduce cotton production by 1.1 million bales which is a loss of approximately \$700 million in lint value alone. Further, due to enduring wet

conditions and labour supply challenges in cotton gins, many cotton bales from the previous season's crop remain in fields and have been affected by inundation, delivering a further blow to growers. CRDC, Cotton Australia, and the Australian Cotton Industry Forum (a collaboration between cotton organisations), are working to understand and support growers and the industry during these times. We are currently collecting data to understand the magnitude of the problem for the industry.

Despite these challenges, the industry remains positive about the seasons ahead: given abundant soil moisture and irrigation storages at or near 100 per cent capacity.

Our Strategic RD&E Plan has three goals, to increase productivity and profitability on cotton farms; to improve cotton farming sustainability and value chain competitiveness; and to build the adaptive capacity of the cotton industry.

We are happy to take any questions you may have about our RD&E investments and activities of the CRDC.

Thank you.

About CRDC

- CRDC has prescribed functions under the PIRD Act 1989.
- CRDC's key functions are to:
 - invest in research and development on behalf of the Australian cotton industry and the Australian Government.
- CRDC is not an industry representative body and therefore does not undertake advocacy or policy development. Cotton Australia is our industry representative organisation. CRDC has a strong relationship with Cotton Australia, and we work closely with Cotton Australia and cotton growers to identify research, development and extension (RD&E) priorities and then assess research applications against those priorities.
- CRDC is overseen by a board and appropriate governance arrangements.
- CRDC helps drive agricultural innovation and has strong collaborative links with a number of fellow RDCs including AgriFutures Australia, the Grains Research and Development Corporation, Dairy Australia, the Fisheries Research and Development Corporation, and Meat and Livestock Australia.
- Our relationship with the Government is governed by a funding agreement as required by the legislation.
- CRDC currently has 11 full time staff, four part time staff and four contract staff (1.7 FTE). Contract staff fulfil specialist roles in IP & commercialisation, the CottonInfo extension program, and specialist program management roles.
- 73 per cent of CRDC staff are women, with 43 percent of the CRDC Board also represented by women.

CRDC accountability framework

- CRDC is committed to continuous improvement.
- We have mechanisms and processes in place that enable regular impartial reviews of performance and identify improvement opportunities – including in stakeholder engagement.
- In December 2021, we were provided *Guidelines for Statutory Funding Agreements*, a *Best Practice Guide to Stakeholder Consultation* and the *RDC Knowledge Transfer and Commercialisation Guide* by the Department.
- Implementation of these three documents is demonstrated at annual performance meetings with the Department and independent reviews of performance.
- CRDC has the flexibility to determine how best to demonstrate achievement of the KPIs set out in the *Guidelines for Statutory Funding Agreements*.
- The Guidelines do not impact the independence of our board.
- Each RDC was required to design their own stakeholder consultation plan and performance measurement framework by 30 June 2022, to demonstrate their achievement of the Key Performance Indicators set out in *Guidelines for Statutory Funding Agreements*. CRDC's stakeholder consultation plan is available on our website: www.crdc.com.au/about-us/meeting-our-government-requirements.

Cotton industry statistics

Forward production



















- Industry estimates of production and yield for the 2022-23 season are sitting at approximately 570,000 hectares and 5.5 million bales. This forecast may be downgraded due to the impact of La Nina and flooding in cotton catchments.

Value

- Overall cotton production in 2021-22 reached 5.5 million bales with a value of \$5.3 billion.
- The forecast export value of cotton in 2022-23 is ~\$7 billion due to delays in harvesting and processing the 2021-22 crop. This would make cotton the third most valuable agricultural export behind beef and wheat.
- The forecast value of the Australian cotton crop in 2022-23 is approximately \$3.6 billion.

Sustainability metrics

- See table over page.

		TARGETED OUTCOMES	2020/21 SUMMARY	SDG ALIGNMENT
PLANET	 Water	Continuous increase in the efficiency of water used for cotton irrigation, within sustainable river & ground water system limits.	<ul style="list-style-type: none"> Water use efficiency improved 48% less water now needed to grow a bale of cotton compared to 1993. 	
	 Greenhouse gases	Contribute to the Paris Agreement's aim of a climate neutral world.	<ul style="list-style-type: none"> Emissions per bale estimated to have reduced 6% from the previous year 	
	 Biodiversity	Native vegetation management in the cotton landscape is in line with regional priorities ¹ .	<ul style="list-style-type: none"> 21% of an average cotton farm is remnant native vegetation 	
	 Pesticides	Pesticide use supports optimal crop production while having no negative impact on human & environmental health.	<ul style="list-style-type: none"> Insecticide hazard reduced Herbicide hazard increased: more rain = more weeds 	
	 Soil Health	Sustained cotton productivity growth by improving soil health.	<ul style="list-style-type: none"> Soil health measures are being developed 30% of growers use cover crops 	
PEOPLE	 Wellbeing	Contribute to improved wellbeing of people living and working in cotton communities.	<ul style="list-style-type: none"> Physical health and community involvement has increased Mental health has decreased 	
	 Workplace	Injury-free cotton farms, skills for innovative and modern agriculture, & a diverse workforce that is treated ethically.	<ul style="list-style-type: none"> Better workplace data is a priority Industry workplace strategy in development 	
PADDOCK	 Productivity	Increase Australian cotton yield and quality within sustainable environmental boundaries.	<ul style="list-style-type: none"> Yield increased from previous two drought years, but remains below long-term trend 	
	 Profitability	Growers have sufficient profitability to confidently re-invest in their business & community.	<ul style="list-style-type: none"> No insights on 2021 profitability due to a data lag. 	

Current key issues

Cotton workforce

- The cotton industry is impacted by significant shortages in labour throughout the entire supply chain. Growers continue to struggle to attract sufficient labour for on-farm activity: particularly noticeable during irrigation and harvest. Gins involved in the processing of cotton struggle to find sufficient capacity to fully run plants during the ginning season.

Water

- CRDC notes that the Budget contained \$11 billion for water buybacks.
- CRDC believes that innovation can deliver shared benefits to irrigators and the environment, helping to achieve water savings without resorting to water buybacks.
- CRDC and the cotton Industry held a water roundtable with members of the Commonwealth Department of Climate Change, Energy, the Environment and Water and relevant state departments recently to discuss possible alternatives to buybacks. These include RD&E innovations directly supported by CRDC, and through co-investment (such as the Smarter Irrigation for Profit program, co-funded by CRDC and the Government through the Rural R&D for Profit program) aimed specifically at

reversing the greatest system losses. For example, evaporation losses from on-farm storage amount to approximately 1470 GL per year. RD&E has shown that evaporation can be reduced by close to 40 percent through the use of baffles (which reduce wind flow across storages) and the use of polymers. Additionally, adoption of automated irrigation systems on cotton farms can reduce water use by 1-2 ML per hectare. CRDC believes that investing in innovative and infrastructure development can create a win-win for growers, communities and the environment by sharing the benefits of savings.

- Water use efficiency is of paramount importance to the cotton industry. We now use 48 percent less water to produce a bale of cotton compared to 1993.