

Senate Estimates, RRAT Committee

CRDC Briefing Pack

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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 today to discuss research and development activities undertaken on behalf of the Australian cotton industry.

CRDC is a statutory RDC located in regional NSW with Narrabri being our headquarters. We are a small team, with members based in Narrabri, Toowoomba and Emerald in Central Queensland. Our purpose under our new Strategic Plan (which was sent to the Minister this week) is to grow the sustainable future of cotton through innovation with impact. Our new plan has three key pillars: Paddock – our future fields; People – central to our success; and Planet – our shared future, where we are focused on addressing the impacts of climate change and developing a circular economy for cotton.

Historically the industry was primarily located in northern NSW and south-east and central Queensland. More recently due to varietal improvements, agronomic practices and GM technology the industry has expanded into southern NSW, north Queensland, the Northern Territory and northwest Western Australia.

Australian cotton growers are recognised as world leaders producing some of the highest yields and highest quality cotton globally. Last year the industry produced some 5.6 million bales of cotton, the largest on record, while this year we are expecting slightly lower yields due to the cold wet start to the season. 99 per cent of Australian cotton is exported. China previously was the largest buyer of Australian cotton, however following the soft ban, Indonesia, India, Vietnam Bangladesh, Pakistan and Turkey are key customers.

Cotton lint contributed \$4.2 billion to the Australian economy in 2021-22 and we anticipate a further \$3.6 billion this coming harvest, with a reasonably positive outlook over the next year or two.

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 feed for ruminant animals. For every one-million tonnes of lint produced, the industry also produces 1.6 Million tonnes of cotton seed which primarily remains in Australia and is used to supplement stock feed. Cotton seed oil is also highly valued for its low smoking properties. The Cargill oil seeds crushing plant in Narrabri, which

was closed during the drought due to high seed costs, has recently been recommissioned and will recommence cotton seed crushing in the near future.

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 also does not undertake marketing.
- 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 a 10-year principle-based Statutory Funding Agreement with the Commonwealth, which – along with the Guidelines for Statutory Funding Agreements – requires the organisation to act in accordance with five performance principles: Stakeholder engagement, RD&E activities, Collaboration, Governance, and Monitoring and evaluation.
- We have mechanisms and processes in place that enable regular impartial reviews of performance and identify improvement opportunities – including in stakeholder engagement.

- Our performance is reviewed annually through performance meetings with the Department of Agriculture, Fisheries and Forestry, tripartite meetings with the Department and Cotton Australia, and independent reviews of performance.
- We have developed and published a stakeholder consultation plan and have developed performance measurement frameworks.
- Our 2021-22 Annual Report was tabled in Parliament and published on our website on 21 October 2022.
- CRDC is currently undergoing its four-yearly Independent Performance Review. The draft report has found that CRDC is a high-performing RDC. This is an extract from the draft report: "Its governance processes are very sound and attention to compliance and risk is strong. Planning and reporting processes are excellent, and the organisation is about to embark upon a bold and far-sighted new strategic plan. Management is very well regarded by cotton growers and RD&E providers, with many of the latter believing that CRDC is the best of the RDCs to work with. CRDC is well engaged with and highly supported by the cotton industry and has delivered demonstrable benefits to its stakeholders."
- The final report will be published on the CRDC website.

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.