



*Advancing Australian Cotton*

14 October 2019

Committee Secretariat  
Standing Committee on Agriculture and water Resources  
PO Box 6021  
Parliament House  
Canberra ACT 2600

*Electronically: online submission form*

## **Inquiry: The Growing Australian Agriculture to \$100 Billion by 2030**

Dear Madam or Sir,

### **Introduction**

Cotton Australia is the peak body that represents the interests of Australia's 1,400 cotton growers supporting about 1,200 cotton farming families in NSW, Queensland and now into Victoria.

While our production varies significantly year-to-year, dependent on rainfall and water availability, it is worth on average \$1.5 billion to \$2 billion in annual export earnings.

We are an industry that invests in research and development as a means to achieve productivity gains and ongoing profitability of our industry. Our research investment has delivered average annual yield increases of 3% per year.

A key responsibility for Cotton Australia is advising the Cotton Research and Development Corporation (CRDC) on industry research and development priorities as the Representative Organisation under the PIRD Act (1989).

The 2018-19 year for example saw cotton growers and the Government co-invest \$24.3 million into cotton research development and extension (RD&E) through CRDC, across 300 projects in collaboration with over 100 research partners.

This investment is guided by the Strategic RD&E Plan for 2018-23 and its five key focal areas:

- Increasing productivity and profitability on Australian cotton farms;
- Improving cotton farming sustainability and value chain competitiveness;
- Building the adaptive capacity of the Australian cotton industry;
- Strengthening partnerships and adoptions; and
- Driving RD&E impact.

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Consequently this strategic plan dovetails into the National Farmers' Federation (NFF) 2030 Roadmap, as does Cotton Australia's own Strategic Plan. As an active NFF member Cotton Australia endorses their submissions to this Inquiry.

In order for Australian agriculture to grow to \$100 billion by 2030, agriculture either needs to produce more from the area we have, produce from new areas, or add more value – in reality it will be a combination of the three.

The Australia cotton industry believes it can and must continue its productivity gains.

Australian cotton can be produced on new areas, but in some cases that will displace other crops. For example there is great potential with Bolgard3 to significantly increase rainfed production but that would most likely be at the expense of other broad acre summer crops. Conversely, cotton will lose some irrigation production over time, as some water shifts to higher value crops permanent plantings. (Noting that this task becomes harder when initiatives such as the Basin Plan, for justifiable reasons, restricts access to water.)

Cotton Australia does see some very significant green field opportunities in Northern Australia. We are aware there is significant interest in the Gulf of Carpentaria Catchments in particular.

However there is very little real likelihood of increasing the value of Australian cotton by further processing in Australia, unless and until energy becomes much more affordable. Consequently for our industry the real path to helping meet the \$100 billion target will be producing more from existing areas and greenfield developments.

## **General observations:**

### **Common limiting factors**

Cotton Australia has observed the factors that often limit further expansion into new areas of cotton production are resources (water) and infrastructure (typically transport and access). Similarly, existing cotton business experience a number of challenges and pressures which add cost, create inefficiencies, stifle production and inhibit innovation and potentially further growth. These include:

- Access to resources (land, water)
- Labour – both cost and the challenges regional areas experience on an ongoing basis attracting and retaining appropriately skilled workers
- Infrastructure – transport, connectivity and supporting policies which allow the cost effective movement of equipment and produce
- Poor telecommunications – this continues to be one of the biggest issues limiting farm businesses operations and development. It should not be the case that only those farming business with reliable mobile data coverage over their farm area can make use of the technological advances it brings.

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For example, without secure and reliable internet connectivity digital agriculture cannot achieve the predicted \$20.3 billion boost in the value of production nor stay globally competitive<sup>1</sup>. For cotton alone, research has shown the unconstrained implementation of precision agriculture would lift the gross value of cotton production by almost 30% (or an increase in value of \$394m on 14-15 levels). As the biggest adopters of digital agriculture technologies to improve productivity across the agriculture sector, the Australian cotton industry will feel this most.

Add to these the ongoing tension between the cost of production and maintaining, let alone increasing, productivity.

#### Cost of production versus productivity gains

It is well documented that the cost of production is an ongoing pressure faced by Australian agriculture. It is no different for Australian cotton production and energy consumption is a case in point. While some growers have moved to pressurised irrigation systems to stay competitive, at the same time, the price of both diesel and electricity has exponentially increased. Additional challenges come with the power grid transitioning to include alternative energy, growers want to adopt reliable and low emission energy solutions but the cost or currently inflexible National Energy Market rules stymies this.

Similarly to stay export competitive agriculture Australia-wide has had to find ways of increasing production. This challenge was able to be met during the 1980s and 1990s where the broadacre sector (including cotton) had an annual productivity growth rate of just under two per cent. However into the future the challenge will be to maintain or better yet increase that productivity gain and to do so in a way that makes Australian agriculture resilient in the face of growing climate variability.

Not surprisingly the millennium drought slowed these gains. Furthermore according to ABARES the productivity of the broadacre sector is only averaging around one per cent per annum with no sign of any improvement<sup>2</sup>. If this slower trend continues the timing of the 2030 Roadmap's \$100 billion goal will be put at risk<sup>3</sup>.

The use of agency agreements by input suppliers artificially keeps input costs high and prevents diversity of bulk value purchases. Some regulation of agency agreements is needed to create market competition in this area.

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<sup>1</sup> Leonard, E., Rainbow, R., Trindall, J., Baker, I., Barry, S., Darragh, L., Zhang, A. (2017). Accelerating precision agriculture to decision agriculture: Enabling digital agriculture in Australia. Cotton Research and Development.

<sup>2</sup> <https://www.accc.gov.au/speech/a-national-vision-for-digital-agriculture>

<sup>3</sup> A recent report by ACIL Allen Consulting confirms Australian agriculture is currently tracking towards \$84.3 billion by 2030, \$15.7 billion below the target. Details are available from: [https://www.acilallen.com.au/uploads/files/projects/256/ACILAllen\\_AgriFutures\\_2019-1566966143.pdf](https://www.acilallen.com.au/uploads/files/projects/256/ACILAllen_AgriFutures_2019-1566966143.pdf)



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#### The need for coordinated infrastructure and regional development

In Cotton Australia's view there is a role for government to play in supporting and stimulating development, importantly to ensure the necessary infrastructure is in place to enable business to flourish.

Our support of the Federal Mobile Blackspot Program is a case in point. This government program has been necessary for rural communities, providing crucial upgrades to mobile networks and new infrastructure where investment was not being made by the existing mobile network operators.

New growth and development also needs to be supported by expertise and sound planning (e.g. relevant agronomic science, engineering) in order to address the unique challenges regionally located communities and industry in Australia face. Towns having access to water security for their current and future populations is just one example. For northern Australia seasonal access creates an additional challenge and not just a limitation for communities but also what and who can come on-farm and in turn how and what produce can be shipped to market<sup>4</sup>. The use of Regional Agriculture Deals as articulated in NFF's 2030 Roadmap, would focus the joint government and industry effort that is needed to take plans forward.

One cotton related success story demonstrating this is the rural and research community that has swelled at Narrabri. Despite having a population of only 13,084 people it has the Cotton Research and Development Corporation (CRDC), the Australian Cotton Research Institute and the Plant Breeding Institute, collectively employing 174 people.

Specific to cotton, the CRDC directly employs 14 of these people and supports another 72 within the two agricultural research centres. On top of this is supporting infrastructure such as the gin processing facilities and inland rail port of Narrabri, which also provide employment for Narrabri and district<sup>5</sup>.

Having a vibrant community like this also requires the social needs of business and community to be met. Cotton Australia has observed that often the absence of such will deter potential businesses and their associated workforce. A commitment to ensuring livability in a community will assist in building a long-term, sustainable workforce and future growth.

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<sup>4</sup> Bowen L, (2017) Infrastructure Constraint's on Agricultural Productivity Growth – A Northern Territory Perspective, Farm Policy Journal Vol 14(3) 7-17.

<sup>5</sup> Cotton Research & Development Corporation (2019) Export Control Amendment (Banning Cotton Exports to Ensure Water Security) Bill 2019 Submission response



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### Potential growth areas

Recent developments have opened up potential opportunity for growth, for example in the:

- Gilbert River and Flinders catchments of north Queensland (following announcements by the QLD government in 2015 to release irrigation water). There has been interest in the past in developing this area and Cotton Australia is aware the Gulf of Carpentaria catchments of certainly interest. The limiting factor here is securing supporting infrastructure investments.
- Ord river valley north of Kununurra, far northern WA and also in the NT where active commercial scale trials are currently in train in the Katherine and Daly Water areas. This increasing investment is not just about cotton lint production for fibre but also recognises the cotton seed as a local alternative source of cattle fodder for northern Australia farmers. Some industry commentators are predicting northern Australia production could grow to as much as 600,000 bales over a ten year period of investment. Nevertheless significant development across the north for cotton will not occur until there is investment in one or more gins.
- There are also opportunities to recycle water and make it available to either existing or greenfield irrigation, one such opportunity would be bringing Brisbane's waste water up on to the Downs. Cotton Australia acknowledges this would not be cheap water, but would be a positive step to re-inforce a culture of water recycling.

### A strong industry needs a skilled workforce

Agriculture has to overcome a range of challenges attracting and retaining its workforce, including remoteness of work location, perception issues, and an ageing population. In addition, there is a rising skills bar with increasing integration of technology in all areas, as well as the requirement for management skills including human resource management. It is important that individuals and businesses continue to train and upskill into the future and are supported and encouraged to do so by the various institutions.

Effective, collaborative training efforts between industry, training providers and government that deliver flexible programs aligned with industry needs are required. Capable people and businesses can better position for growth, manage risks and respond effectively.



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Agriculture as a sector has begun recruiting a new generation of technologically savvy graduates, a reflection of the modern and diverse career pathways that are emerging<sup>6</sup>. A key to continuing this success will be having well trained and knowledgeable teachers and school leaders who bring the curriculum to life in regional, rural and remote contexts<sup>7</sup>. To continue to meet changing consumer tastes and preferences as well as export market integrity and biosecurity requirements, and have Australia's food and fibre delivered by a skilled workforce, these barriers and challenges need to be addressed.

Industry will continue to promote the positive career prospects to both regional and metropolitan students. We also support government efforts to increase education levels of regional workers in general, and regional study options as evidence suggests those that study local tend to be employed locally.

In Cotton Australia's view there is a clear need for strategic workforce planning. To do so will require coordinated input from the grassroots up in to ensure that government policies and programs (at all levels) are properly targeted and flexible. This will include migration policies that provide a flexible workforce and incentivise people to the regions, and provide the necessary support for new entrants.

## Conclusion

- Significant gains in growth for the cotton industry would be driven by production in new areas, supported by adequate infrastructure and resources.
- Other gains would come from driving further productivity and efficiencies, as well as reducing challenges and pressures which add cost, inefficiencies and inhibit innovation.
- The cotton industry is proud of the efforts we make to be environmentally sustainable, while striving to achieve the highest levels of production efficiency.
- It's growers are the most likely to adopt new technology compared to their agricultural peers. The fact that approx. 50% of productivity gains have come directly from new plant varieties, is a case in point. Productivity gains will continue through improving yield potential, resistance to pests and diseases and responsiveness to improved management<sup>8</sup>
- The industry has a strong track record regarding production efficiencies (for example less water and pesticides: the industry grows almost twice as much cotton from a megalitre of water than in 1992 and there has been a 93% reduction in insecticide use since 1997).

<sup>6</sup> Australian Academy of Science. (2017). Grow, Make, Prosper. The Decadal Plan for Australian Agricultural Sciences 2017-26. Australian Academy of Science.

<sup>7</sup> Australian Government Department of Education and Training (2018) Independent Review into Regional, Rural and Remote Education, Australian Government Response; 8-9.

<sup>8</sup> M Bange CSIRO (2019) Five trends that are going to drive productivity growth over the next decade, Cotton Collective presentation.



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- The achievements to date have been made possible by sound co-investment in research, development and extension (RD&E) and this underpinning needs to continue for the cotton industry to realise new opportunities in production and processing. [Cotton Australia will be providing more detailed comments about RD&E in its submission to the Department of Agriculture's "Modernising the RDC Sector" discussion paper.]

Cotton Australia thanks the Inquiry for the opportunity to make this submission. If the Committee would like to hear directly from Cotton Australia, it would be delighted to appear as a witness.

Please contact Michael Murray, General Manager, Cotton Australia [REDACTED] or [REDACTED] for further information

Yours sincerely,



Michael Murray,  
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