Introduction
ABOUT CRDC

The Cotton Research and Development Corporation (CRDC) has been delivering outcomes in cotton research, development and extension (RD&E) on behalf of Australia’s cotton growers and the Australian Government for 28 years.

Established in October 1990 and operating under the Primary Industries Research and Development Act 1989 (PIRD Act), CRDC exists to enhance the performance of the Australian cotton industry through investment in, and delivery of, cotton RD&E. CRDC is based in Narrabri, NSW: the heart of one of Australia’s major cotton-growing regions and home to the Australian Cotton Research Institute.

CRDC’s role is to invest in RD&E on behalf of cotton growers and the government, with the outcomes boosting the productivity and profitability of our industry. RD&E, and its resulting innovations, are a key driving force behind the cotton industry’s continued success.

2017-18 marked a significant year for CRDC – the culmination of five years investment under the 2013-18 Strategic RD&E Plan, and its resulting impact. In this final year, CRDC invested $25.1 million into 318 RD&E projects in collaboration with 118 research partners and growers who conducted on-farm trials, across five key program areas: farmers, industry, customers, people and performance.

The findings from these research projects continue to be extended through a range of methods including the publication of information, extension of knowledge and commercialisation of new products and services. The industry’s joint extension program, CottonInfo, is the key mechanism for supporting adoption of the results of research in combination with best management practices encouraged via the industry program myBMP. CRDC is a founding partner of both programs.

These investments achieved real impact for cotton growers, the industry and the wider community during 2017-18 – as detailed within this report.

Vision: A globally competitive and responsible cotton industry.

Mission: To invest in RD&E for the world-leading Australian cotton industry.

Purpose: Enhancing the performance of the Australian cotton industry and community through investing in research and development, and its application.
Executive Summary

REPORT FROM THE CHAIR AND EXECUTIVE DIRECTOR

Under the 2013-18 Strategic RD&E Plan, CRDC strategically invested in RD&E in five core priority areas – farmers, industry, customers, people, and performance – to drive forward profitability, competitiveness and sustainability for the benefit of cotton growers and the wider community.

CRDC continued to deliver real impact for cotton growers through our RD&E investments in 2017-18 – bringing to a close the strategic investment priorities of the 2013-18 Strategic RD&E Plan.

Working closely with industry and government stakeholders, CRDC created gains for the industry through RD&E, delivering against the goals and objectives of this Plan and helping growers achieve 4.6 million bales of cotton this year, up from 4.2 million bales in 2016-17.

During this year, CRDC invested $25.1 million in collaboration with 118 research partners and growers into 318 RD&E projects and on-farm trials across the five key program areas. In this report, we highlight some of our significant research achievements during this year and provide an update on how key projects are progressing.

In last year’s report, we outlined three impact assessment reports into CRDC’s RD&E investments, which found benefit-cost ratios of 17.1 to 1 for our investment in the Central QLD early planting research; 8.29 to 1 for our investment in water-use efficiency research; and 5.4 to 1 for our nutrition investments. This year, we continued to conduct impact assessments, with the two latest reports finding our investment into the industry program myBMP on behalf of growers and the government delivered a benefit-cost of 9.1 to 1; and into industry sustainability a benefit-cost of 2.5 to 1. These reports highlight the contribution that RD&E makes to the industry at large.

This year, CRDC has continued to lead the three major collaborative projects under the Department of Agriculture and Water Resources’ Rural R&D for Profit program: Smarter Irrigation for Profit, More Profit from Nitrogen, and Accelerating Precision Agriculture to Decision Agriculture. All three projects reached critical stages in 2017-18, with the finalisation of the Precision to Decision Agriculture project (the first collaborative project across all 15 of our fellow Rural Research and Development Corporations), and its official launch by the Minister for Agriculture and Water Resources, the Hon. David Littleproud MP at the ABARES Outlook national conference in Canberra in March 2018.

A major outcome of the Precision to Decision Agriculture project was finding that the implementation of digital agriculture across all Australian production sectors could lift the gross value of agricultural production by $20.3 billion – a 25 per cent increase on 2014. This shows the enormous potential of digital agriculture, and the RDCs are now working together to drive stage two of this project forward.

The cotton industry has long embraced new technology, and CRDC continues to play a leading role in driving the application and adoption of new innovations and developments. This year, we have been investigating how working with the start-up community through accelerators, incubators and venture capitalists can help bring beneficial new technology products and services to the cotton industry. Agtech is already a part of the Australian cotton growing and processing landscape, with many CRDC projects – from canopy temperature sensors, to temperature inversion weather stations, weed sensing for robotics, and irrigation automation technology – playing a role.
Looking forward, we anticipate there will be a lot of change in our industry – from where we grow cotton to the technology we will use to grow it. In this regard, the development of a new five-year CRDC Strategic RD&E Plan, commencing 1 July 2018, has strongly informed the future direction for technology-based solutions and innovation as we support sustainable growth, responsible practices, profitability and the adaptive capacity of the Australian cotton industry. It has also challenged us to think about how CRDC can innovate within our business processes to ensure the organisation is fit for purpose, now and into the future. With these thoughts in mind, we expect to make some changes as we embark on the ambition to contribute to creating $2 billion in additional gross value of cotton production for the benefit of Australian cotton growers and the wider community by 2023.

On behalf of our fellow Directors, we invite you to read the CRDC Annual Report for 2017-18.

Richard Haire
CRDC Chair

Bruce Finney
CRDC Executive Director

Pictured at the official launch of the Accelerating Precision to Decision Agriculture project at ABARES in March 2018: Leanne Wiseman of the Australian Centre of Intellectual Property in Agriculture (ACIPA) at Griffith University; Bruce Finney, Executive Director, CRDC; the Hon. David Littleproud MP, Minister for Agriculture and Water Resources; Jane Trindall, R&D Manager, CRDC and Tim Lester, Executive Officer, Council of Rural RDCs.
CRDC’s RD&E investments during 2017-18 were governed by the Strategic R&D Plan 2013-18, which outlined five key investment programs – farmers, industry, customers, people and performance. During the lifespan of the plan 2013-18, CRDC completed an analysis of performance against the Strategic Plan measures and reported outcomes annually. 2017-18 marked CRDC’s final year of operation under this Strategic Plan. The table below shows CRDC achievements against the Strategic Plan programs ending 30 June 2018. Progress was measured through the CRDC monitoring and evaluation framework. Each of the measures of success outlined in the Strategic Plan had corresponding metrics, against which performance was measured through annual quantitative and qualitative surveys. The red, amber and green traffic light system was used in CRDC’s monitoring and evaluation to track overall performance against the CRDC Strategic Plan.

- The specific measure has been achieved.
- We did not fully achieve this target.
- Measure not delivered.

### Strategic Plan Measures

#### Farmers: Cotton is profitable and consistently farmers’ crop of choice

| Farmers increase productivity by 3 per cent per hectare per year | Average annual increase in yield for the five years of the 2013-2018 strategic plan was maintained at 3 per cent per hectare per year despite reduced yields in 2016-17. The compounding annual growth remained at just above 2 per cent for the five-year period. |

#### Industry: The Australian cotton industry is the global leader in sustainable agriculture

| Industry can report against recognised sustainability indicators | The Australian cotton industry was the first agricultural industry in Australia to develop and document its performance against specific environmental, economic and social sustainability indicators. The 2014 Australian Grown Cotton Sustainability Report developed and benchmarked 45 key sustainability indicators for the Australian cotton industry. The cotton industry is committed to ongoing sustainability reporting, and with significant CRDC support has developed a range of new sustainability targets. Benchmarks as at June 2018 for these targets are:
- 1.1 bales/ML (GPWI)
- 6 per cent of farm native vegetation managed for conservation
- 10 kg lint/kg of nitrogen
- 383 kg of CO₂e per bale of cotton produced |

#### Customers: The Australian cotton industry captures the full value of its products

| Double the premium for Australian cotton | CRDC invested in a number of projects to investigate and improve the quality of Australian cotton, and while successful, environmental impacts such as rainfall at harvest can reduce the overall quality of Australian cotton resulting in Australia maintaining its premium rather than doubling the premium. While maintaining efforts to improve fibre quality and develop systems that alleviate risk to quality, CRDC has furthered its research efforts to develop novel high-value uses for Australian cotton. These approaches are longer term initiatives and will make Australian cotton more competitive with man-made fibres. |

#### People: Capable and connected people driving the cotton industry

| A skilled, educated and progressive workforce | CRDC and Cotton Australia collaborated to deliver the industry’s first Workforce Development Strategy in 2015-16, and in 2016-17, the strategy resulted in $14.7 million in vocational training funding from the NSW Government being made available through Cotton Australia for NSW cotton and grains industries. In addition, CRDC has continued support for 10 industry leadership and development programs. A study published by CRDC in 2017 to better understand and build the role of women’s participation in the Australian cotton industry determined that 88 per cent of women in an industry role and 86 per cent of women on cotton farms have a diploma, degree or higher qualification, with 71 per cent involved in making major business decisions. |

#### Performance: Measured performance of the Australian cotton industry and its RD&E drives continuous improvement

| Measured performance of the Australian cotton industry and its RD&E drives continuous improvement | CRDC’s RD&E underpins the industry’s best management practices program, myBMP, with industry participation in the program now at 78 per cent. In addition, CRDC’s monitoring and evaluation (M&E) framework enables ongoing performance reporting. In 2017-18, CRDC continued to measure its performance and that of the industry through M&E, including a survey of growers, a survey of consultants, an economic analysis of the industry’s performance, a longitudinal study of investments, and impact assessments of specific project clusters. |

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Executive Summary

FINAL REPORT AGAINST CRDC STRATEGIC R&D PLAN 2013-18
**Executive Summary**

**2017-18 INVESTMENT AND IMPACT**

**THE AUSTRALIAN COTTON INDUSTRY IN 2017-18:**

- **4.6 million bales** produced by the Australian cotton industry
- **500,000 hectares** planted into irrigated and dryland cotton, just shy of the 2016-17 crop, which was the largest crop in five years.
- **$2.92 billion** gross value of cotton production.

(Source: ABARES Ag Commodities Report, June 2018)

**CRDC’S INVESTMENT IN 2017-18:**

- **$25.1 million** – CRDC’s investment in cotton RD&E on behalf of cotton growers and the Australian Government

**CRDC’S IMPACT IN 2017-18:**

- **318** RD&E projects
- **118** research partners
- **5** key program areas: farmers, industry, customers, people and performance

- **3%** average growth in yield per hectare over the five years from 2013: achieving our Strategic Plan goal.

- **130** The number of events the CottonInfo team attended or hosted in 2017-18, engaging with some 4200 industry personnel, including growers, consultants, agribusinesses, supply chain representatives, government and natural resource bodies.

- **3000** The number of copies published of the industry’s flagship publications, the Australian Cotton Production Manual, and the Cotton Pest Management Guide, co-published by CRDC and CottonInfo.

- **$1.1 million** The investment by the National Landcare Program Smart Farming Partnerships in new technologies to improve natural resources and biodiversity on Australian cotton farms project, led by CRDC.
78% of presenters at the Association of Australian Cotton Scientists’ Australian Cotton Research Conference in August 2017 represented CRDC’s investments in RD&E.

40% The percentage of CRDC research that is in cross-sectoral RD&E.

33 innovative projects
– invested in by CRDC under the ‘blue sky’ Cotton Futures theme in 2017-18, including innovations in gin trash, polymers, new technologies to measure water stress and technologies enabled by robotics to improve weed control.

$20.3 BILLION
– the amount by which the gross value of all agricultural production could increase through the implementation of digital agriculture across all Australian production sectors – a 25 per cent increase on 2014 - a key finding of the Accelerating Precision to Decision Agriculture project.

3 NEW PRODUCTS
– successfully commercialised in 2017-18 with CSIRO: Cottonspec, cotton contamination detection sensors for gins, and algorithms for stress-time thresholds (for on-farm canopy temperature sensors).

9.1:1 the benefit-cost ratio of CRDC’s investment in the collaborative industry myBMP program: $9.10 in benefit to growers for every $1 invested by growers and the government through CRDC into this RD&E.

2.5:1 the benefit-cost ratio of CRDC’s investment in the industry sustainability RD&E: $2.50 in benefit to growers for every $1 invested by growers and the government through CRDC into this RD&E.

3 MAJOR COLLABORATIVE PROJECTS
– driven by CRDC under the Rural R&D for Profit program: Smarter Irrigation for Profi, More Profit from Nitrogen, and Accelerating Precision Agriculture to Decision Agriculture.

78% the number of growers participating in myBMP.

863,000 The number of collective views that the 152 CRDC-supported best practice videos have amassed on the CottonInfo YouTube channel as at June 2018.

One video, on starting a siphon pipe, has been viewed 781,000 times.
Executive Summary

YEAR IN REVIEW: CRDC RD&E ACHIEVEMENTS

CRDC RD&E: continuing to deliver real impact for cotton growers

Following the first stage of impact assessments of CRDC’s RD&E investments and impacts in 2016-17 (which found our water investments delivered a benefit-cost ratio of 8.29 to 1; our nutrition investments a benefit of 5.4 to 1; and our partnership with QDAF on the Central QLD early planting research 17.1 to 1) the second stage of impact assessments were conducted in 2017-18, focusing on CRDC’s sustainability RD&E investments and the industry’s myBMP program. The assessments found that CRDC’s investment of $4.85 million on behalf of cotton growers and the Australian Government into six projects focusing on improving the sustainability of the Australian cotton industry provided a return of $12.26 million, and a benefit-cost ratio of 2.5 to 1. In addition, CRDC’s investment of $6.39 million in six projects to support the industry’s myBMP program from 2012 to 2017 returned a benefit of $58.15 million, a benefit-cost ratio of 9.1 to 1.

Completion of current, and development of new, Strategic RD&E Plan

2017-18 marked the final year for CRDC under the 2013-18 Strategic Plan. This Plan outlined five core goals that the corporation aimed to achieve through investment in RD&E for the benefit of the Australian cotton industry – helping cotton growers to achieve an increase in productivity of three per cent per hectare per year; enabling the industry to report against recognised sustainability indicators; doubling the premium for Australian cotton; developing a skilled, educated and progressive workforce; and ensuring the measured performance of the Australian cotton industry and its RD&E drives continuous improvement. 2017-18 saw the completion of four of the five measures, with work well underway on the fifth: doubling the premium for Australian cotton.

During 2017-18, CRDC also finalised the development of CRDC’s new Strategic RD&E Plan 2018-23. This Plan sets an ambitious direction for the future of the Australian cotton industry, with CRDC’s goal to contribute to creating $2 billion in additional gross value of cotton production for the benefit of growers and the wider community by 2023. The new Plan commenced on 1 July 2018.

Delivery of three major CRDC-led collaborative grant projects

CRDC has been leading three major collaborative grants under the Rural R&D for Profit program: Smarter Irrigation for Profit, More Profit from Nitrogen, and Accelerating Precision Agriculture to Decision Agriculture. All three projects reached critical stages in 2017-18, with the finalisation of the Precision to Decision Agriculture project, and its official launch by the Minister for Agriculture and Water Resources, the Hon. David Littleproud MP at the ABARES Outlook national conference in Canberra; and the final years of Smarter Irrigation and More Profit from Nitrogen. A major outcome of the Precision to Decision Agriculture project is the release of the final report, which has found that the implementation of digital agriculture across all Australian production sectors – represented by the 15 Research and Development Corporations who partnered in the program – could lift the gross value of agricultural production by $20.3 billion – a 25 per cent increase on 2014.

In addition to the Rural R&D for Profit program grants, an additional new CRDC-led collaborative project was announced in June 2018 under the National Landcare Program Smart Farming Partnership, focused on developing new technologies to improve natural resources (biodiversity) on Australian cotton farms.
CRDC-supported innovation commercialised in 2017-18

CRDC successfully commercialised three new products during 2017-18 with its research partner CSIRO. These included Cottonspec, cotton contamination detection sensors for gins, and algorithms for stress-time thresholds. These three technologies have the potential to greatly benefit growers and the industry. Cottonspec is a yarn-quality prediction program, that enables spinners to accurately predict the yarn that will be produced from the cotton growths utilised. The cotton contamination detection sensors detect and record contamination events at the gin, helping to prevent contamination issues in ginning, spinning, weaving and knitting. And the stress-time threshold algorithms are designed to support the use of canopy temperature sensors on-farm, helping growers to make decisions regarding the timing of irrigations. Using the canopy temperature sensors with the optimisation algorithms could result in a 5-10 per cent benefit in water-use efficiency in climatically challenging seasons. Through CRDC’s commercialisation program, these project outputs are now being commercialised with industry partners to accelerate the scale and rate of adoption of these technologies.

Investing in critical core research: pests, weeds and diseases

During this year, CRDC continued to invest in critical areas of cotton industry R&D: integrated pest, weed and disease management. These three areas are core priority areas for growers and the industry: ensuring we can continue to grow high-quality cotton with minimal disruption from pests, weeds and diseases. Our integrated pest management investments were in direct response to high pest pressure experienced by the industry, and included R&D focused on silverleaf whitefly, pest-suppressive landscapes, resistance monitoring, helicoverpa egg lays, real-time broad scale insect monitoring, and extension via the CottonInfo pest management short course.

Integrated weed management investments focused on guarding against resistance and spray drift, ensuring the industry can stay ahead of the weed evolution. This included a CRDC-supported study tour for growers to the US, membership of WeedSmart, new tools in the industry’s arsenal for drift management, and continued research into temperature inversions. From an integrated disease management perspective, two new pathologists were appointed at the Australian Cotton Research Institute during this year, focusing on two CRDC-supported projects to conduct the national disease survey, and find innovative solutions to cotton diseases.

Biosecurity in focus: Be a good mate, stop it at the gate

A new biosecurity extension campaign, *Be a good mate, stop it at the gate*, commenced in 2017-18, driven by the CottonInfo biosecurity technical lead and underpinned by CRDC’s R&D in biosecurity and the resulting best practice. The campaign recognises that growers play a key role in protecting Australia’s agricultural industries from pests and diseases, and on-farm biosecurity and hygiene measures can help stop the introduction and spread of endemic and exotic insects, weeds and diseases. The campaign is a central component of CottonInfo’s activity at the 2018 Australian Cotton Conference.

Tracking our water productivity over time: the cotton water benchmarking study

CRDC invested in a NSW DPI water productivity study during the 2017-18 season: following on from similar surveys in the 2006-07, 2008-09 and 2012-13 years. This is an important piece of research for the industry, providing crucial metrics for the industry to understand its current performance, and continuously improve. The results of the previous surveys have found that the industry has achieved a 40 per cent increase in water productivity since 2003. The data from the study is due to be released in 2018-19.
Cotton Futures: innovation on the agenda

Under the 2013-18 Strategic Plan, CRDC has been investing in Cotton Futures, a blue-sky investment program designed to determine the feasibility of novel tools and technologies for the industry. In 2017-18, CRDC invested in 33 innovative blue-sky projects under Cotton Futures themes, 12 of which began during this year. These projects include innovations in gin trash, polymers, new technologies to measure water stress, and technologies enabled by robotics to improve weed control.

Building capacity: CRDC’s ‘people’ program

The cotton industry recognises that people are its most important resource, and as such, CRDC’s ‘people’ program invests in capacity building projects to enhance capability and connection. During 2017-18, this investment included support for four leadership programs: the Australian Rural Leadership Program, in partnership with Cotton Australia and Auscott Limited; Nuffield Scholarships, in partnership with Cotton Australia; Peter Cullen Trust; and the ABARES Science and Innovation Award for Young People in Agriculture. CRDC also supports development programs, including the AgriFutures Australia Horizon Scholarship and Cotton Australia and CRDC’s Cotton Future Leaders Program; and runs the CRDC PhD, summer and honours scholarship program. We also support the AgriFutures Rural Women’s Award, designed to recognise the contribution of outstanding women in agriculture.

From the ground up: CRDC’s Grassroots Grants program

CRDC’s Grassroots Grants program encourages Cotton Grower Associations to apply for funding to support capacity-building projects in their regions. Up to $10,000 in funding is available for CGAs to help fund a project aimed at increasing the engagement of growers in the industry, solving specific regional issues, and improving their skills, knowledge base and networks. Since the Grassroots Grants program commenced in 2011, CRDC has invested over $548,600 into 62 projects across the cotton-growing valleys, including 10 in 2017-18.

Incubating startups: new investment approach for CRDC

In 2016-17, CRDC began working in the entrepreneurial space with start-up science company Pollenizer, and its successor, X-Lab. CRDC’s work to incubate potential cotton start-ups and entrepreneurs gained strength in 2017-18, with the continuation of the X-Lab partnership. In this year, CRDC invested in an incubator program, provided support to Startup Catalyst, sponsored the MIT-QUT bootcamp, solidified a partnership with X-Lab to provide a more innovation-driven approach to RD&E investments, and formed a strategic partnership with NSW DPI’s The Gate. Work also began in this year on Startup Alley – a new initiative at the Australian Cotton Conference designed to showcase cotton-specific entrepreneurs and innovations. One major RD&E outcome has already been delivered through this new investment approach, with CRDC investing in a new technology, Flurosat, which uses data analytics from drone and satellite imagery to assess plant health, diagnose problems and direct fertiliser application.

RD&E supporting continued industry expansion

The Australian cotton industry continues to expand, with the industry extending both to the south and north. In 2016-17, a research role was created, with support from CRDC, to address issues faced by southern growers, particularly germination and emergence. In 2017-18, CRDC has continued its investment in cotton research for northern Australia, particularly cotton developments in northern Western Australia. The CRDC and Cotton Australia Nuffield Scholar for 2018, Luke McKay, is a cotton grower from Kununurra, who is investigating tropical cotton-growing systems and considerations, including double cropping, rotation crops, irrigation methods, staff requirements, machinery requirements and environmental management.
CRDC-supported researchers recognised for cotton contributions
In 2017-18, a number of CRDC-supported researchers have been recognised for their major contributions to cotton RD&E. Professor Peter Gregg, Dr Lewis Wilson, Dr Mary Whitehouse and Dr Grant Herron have proven themselves as leading experts in the entomology field, having been published in the pinnacle scientific publication, the *Annual Review of Entomology*. Dr Paul Grundy and Dr Stephen Yeates were recognised for their work on the CRDC-supported QDAF-led early planting research in Central QLD by being awarded the 2017 CSD Researcher of the Year Award. A team of researchers from Deakin University, led by Professor Xungai Wang, was awarded an H&M Foundation Global Change Award in 2017 for their innovative work on reducing the environmental impact of denim production. The team had been supported by CRDC on an initial project in this area. In addition, UQ PhD student Rhys Pirie received the CRDC-supported ABARES Science and Innovation Award in 2018, and a grant from the Minister for Agriculture and Water Resources by winning the overall 2018 Minister’s Science and Innovation Award. As part of his research, Rhys will develop a low-energy methodology to transform organic wastes into high-efficiency fertiliser.

Extension of R&D outcomes to growers: CottonInfo connecting growers with research
CottonInfo’s extension of cotton R&D to growers had three major focuses in 2017-18: managing irrigation to improve nitrogen-use efficiency; tackling the increased threat of pests, diseases and resistant weeds in cotton-growing regions; and identifying and managing soil constraints and optimising the efficient use of inputs. A major project for the team during the year was the delivery of the optimising irrigation and nitrogen researchers’ tour, which saw 12 CRDC-supported researchers go on-farm with over 400 growers and consultants across the cotton-growing valleys.
Executive Summary
YEAR IN REVIEW: ORGANISATIONAL HIGHLIGHTS

New CRDC Directors appointed: providing strategic direction for cotton industry RD&E

In November 2017, CRDC welcomed the appointment of three new Board Directors: Ms Rosemary Richards, Professor Les Copeland, and Dr Jeremy Burdon. The Directors join the existing CRDC Board: Chair Mr Richard Haire, Executive Director Mr Bruce Finney, and Non-Executive Directors Ms Kathryn Adams, Mrs Elizabeth (Liz) Alexander and Mr Greg Kauter. Two Directors completed their tenures with the Board in September 2017, and CRDC recognised their contribution to the cotton industry: Deputy Chair and St George cotton grower, Mr Cleave Rogan, and Director and Plant Biosecurity CRC CEO, Dr Michael Robinson. Ms Kathryn Adams has subsequently been elected as CRDC’s Deputy Chair. In February 2018, the CRDC Directors went on-farm at Brookstead for the CottonInfo researchers’ tour, providing an opportunity to meet with local growers, view the implementation of CRDC-supported research and discuss research priorities in response to local needs.

Fourth annual Research Priority Forum identifies cotton RD&E priorities

CRDC’s fourth annual research priority setting forum was held in Sydney in June 2018, bringing together cotton growers and industry supply chain members on Cotton Australia’s research advisory panels to help determine the industry’s future research priorities. The Forum is part of CRDC’s procurement process, which was revised in 2015-16 to improve efficiency, streamline the RD&E investment process and provide greater clarity to researchers.

Collaboration: a key to cotton RD&E

CRDC works in partnership with other industry bodies and other rural research and development corporations (RDCs) to achieve strategic outcomes for the industry, and to leverage higher returns for our investments. This underpins our investment strategy, with CRDC partnering in over 80 per cent of RD&E projects conducted in the cotton sector. In 2017-18, 40 per cent of CRDC investments are in cross-sectoral RD&E. The collaboration extends from national to cotton industry-specific and local initiatives – from national cross-sectoral partnerships on water and soils; to the industry-specific extension joint venture, CottonInfo with Cotton Australia and Cotton Seed Distributors; and at the local level, partnerships with Cotton Grower Associations on CRDC Grassroots Grants. CRDC also plays a strong leadership role in the cotton industry and the wider agricultural sector, with active involvement in the Council of Rural Research and Development Corporations (CRRDC); the Research and Innovation Sub-Committee of the Agriculture Senior Officials Committee (AgSOC); the National Primary Industries Research, Development and Extension Framework; and the Cotton Innovation Network, where CRDC collaborated with partners on the development of a vision for cotton RD&E capability.
International research collaboration

Australia is well recognised as a global leader in cotton RD&E and, in addition to building strong partnerships and collaborations with Australian research partners, CRDC also builds mutually beneficial relationships abroad. In 2017-18, this has included partnering with our US counterpart, CottonInc, on seven RD&E projects; and attending the International Cotton Advisory Committee (ICAC) Social Environmental and Economic Performance of Cotton (SEEP) Conference; the Better Cotton Initiative Conference; the Sustainable Apparel Coalition Annual General Meeting; the Bremen Cotton Conference; and the International Society of Precision Agriculture Conference. CRDC also built relationships with the International Wool Textile Organisation, the German Sustainable Textile Initiative, and the DO School, and supported Australian cotton growers on a weed resistance management study tour to the US.

CRDC RD&E showcased at industry events

CRDC-supported RD&E projects were showcased at the major research event, the Association of Australian Cotton Scientists’ Australian Cotton Research Conference in August 2017, with 58 per cent of speakers on the conference agenda supported by CRDC. RD&E also featured at the Cotton Australia Cotton Collective, held in Griffith in July 2017. CRDC is continuing its support for the major industry event, the 19th Australian Cotton Conference, in August 2018, the planning for which began in 2017-18.

Strong demand for flagship RD&E publications

CRDC’s latest research outcomes were published in two key publications during the year in conjunction with the CottonInfo extension team. The Cotton Pest Management Guide was published in September 2017, and the Australian Cotton Production Manual in May 2018. The flagship publications feature the latest RD&E and best practice information, are compiled by a team of authors who are each leading researchers and experts in their respective fields, and are key reference tools for the industry, with annual subscriptions of 3000 copies. These publications consistently rank as the most preferred method of receiving R&D information among consultants. During this year, CRDC established a partnership with Crop Consultants Australia (CCA) on the development of the 2018-19 Cotton Pest Management Guide, released in September 2018, with the CCA forming a technical review panel to ensure the publication remains as useful as possible for both growers and consultants.

Interactive digital dashboard for CRDC grower survey

The 2017-18 year marked 21 years of the CRDC Cotton Grower Survey, which gathers valuable information about cotton farming practices to give a greater understanding of the industry’s performance. The survey provides important information to CRDC and Cotton Australia about the industry, on-farm practices, and priority areas for future research. For the first time in 2018, the results of the survey were published via a new online interactive digital dashboard, allowing growers to explore the data in more depth and to compare results across regions.
**Projects by CRDC program area**

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<th>CRDC program</th>
<th>Farmers</th>
<th>Industry</th>
<th>Customers</th>
<th>People</th>
<th>Performance</th>
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<td>48</td>
<td>25</td>
<td>104</td>
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<td>318</td>
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<td>6%</td>
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<td>100%</td>
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* Excludes budgeted employee and supplier expenditure and corporate research activities that support R&D planning and adoption. Some percentages have been rounded up or down.

**Investment by program**

- Farmers (63%)
- Industry (22%)
- Customers (6%)
- People (6%)
- Performance (3%)

**Total number of CRDC projects**

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Further detail on CRDC’s projects can be found in Section 4: RD&E Portfolio, and in Appendix 4: RD&E Portfolio of the full Annual Report.