

Annual Operating Plan 2007-2008

Cotton Research and Development Corporation

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Australian Government

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Annual Operating Plan

Executive Summary



Cotton farmers relying on CRDC-funded research to optimise water use efficiency.

This AOP has been developed within the context of significant challenges and changes at both industry and government levels.

The Annual Operating Plan 2007–08 (AOP) is the fifth annual operating plan devised under the Cotton Research and Development Corporation (CRDC) Strategic R&D Plan 2003–2008.

The Strategic R&D Plan sets in place triple bottom line accountability for the Corporation. With this AOP, CRDC details how it shall consolidate the undertakings contained within clearly defined and measurable environmental, economic and social benefits accruing to the cotton industry with spill-over to the wider community.

This AOP has been developed within the context of significant challenges and changes at both industry and government levels.

These include:

the ongoing and serious impact of drought on our industry, agriculture, rural Australia and the nation as a whole;

the forthcoming revision of the Australian Government's Rural R&D priorities;

the cessation of the existing five year strategic R&D plan at June 30, 2008;

changes in the governance of Rural R&D Corporations including the introduction of Statements of Expectations and Intent.

CRDC has been able to sustain over \$12 million per annum of investment in cotton research, development and extension over each of the last four years through prudent financial management.

This has been achieved despite significant reductions in revenue.

The ongoing drought has resulted in the 2007 cotton harvest being the smallest Australian crop in 20 years. Consequently, CRDC cannot sustain historic levels of R&D investment. During in 2007-08 the CRDC will invest \$10.5 million in research, development and extension.

CRDC has sought to work closely with all its research partners to minimise the impact this reduction will have on the achievement of strategic outcomes - the research effort generally, and researchers specifically. CRDC will continue to monitor its financial position very carefully as the current outlook for the 2007-08 cotton season remains highly uncertain.

CRDC has appreciated the opportunity to be involved in and informed of the forthcoming revision of the Australian Government's Rural R&D priorities. These discussions have been timely and instructive as CRDC has commenced working with Government and industry to develop a new Strategic R&D Plan for the years 2008 – 2013. Formation of the new Strategic R&D Plan commenced in January 2007 and its development is scheduled to span 15 months of scoping and consultation before it is complete. This 15-month timeframe reflects the importance of a deeply considered and well focused R&D Plan as the basis for conducting our business. Initial workshoping of the Strategic R&D Plan has been adequately informed as to allow it to influence the development of this AOP. In that, where the current strategic outcomes have been achieved or alignment of strategies and resources has allowed, CRDC has sought transition in research investments.

The AOP, in support of our Statement of Intent, is a key mechanism through which the Corporation details how it will meet the requirements of the Statement of Expectations introduced under changes to the governance of Rural R&D Corporations. Profitability remains the major concern for the cotton industry.

Lack of production due to lack of water and historically low Australian cotton prices, together with ever-increasing costs of inputs such as fuel, water, fertilizers, equipment and labour, means the bottom line is extremely tight.

2007 - 2008

If there is an upside of this situation it is an even greater focus on the uptake of R&D outputs which assist with optimising inputs, driving efficiency and productivity gains.

The Corporation has invested in the renewal of the number and reach of extension personnel in the industry Extension Team. The coming year will see a focus on the coordinated delivery of R&D outcomes as well as integrating and supporting the delivery of the cotton industry's Best Management Practices (BMP) program to growers. A comprehensive revision of the BMP manual content and its delivery format is also planned.

Over the last ten years, the cotton industry has embraced the use of genetically modified (GM) technology, with almost 90 per cent of plantings now consisting of GM varieties. Bollgard®II has proved to be outstandingly successful in reducing the amounts of insecticides used in the industry. This has also reduced the need for the level of research into conventional pests—particularly with reference to *Helicoverpa* sp. The stewardship of GM technologies is a key area for ongoing investment and includes investment in resistance monitoring and management. With the success of Bollgard®II secondary pests - in particular, aphids, silverleaf whitefly and mirids—are of increased importance and investment will be channelled into research which aims to increase industry's understanding of how integrated pest management (IPM) techniques can be enhanced to control secondary pests.

A review of cotton disease research in 2007 highlighted that whilst much progress has been achieved in reducing the impact of disease the ongoing risk to the industry from two key soil-borne diseases, Fusarium Wilt and Black Root Rot, remains a significant threat. The Corporation has an ongoing research and development portfolio addressing the disease threat.

Investment in water use efficiency related research, development and extension remains a top priority for the Corporation. As well as continuing to invest in the well regarded Water Extension Team, the Corporation will also place an increased focus on investment in water use efficiency practices and technologies in irrigation programs delivered

through the Cotton CRC and Land & Water Australia.

The cotton industry drove the inception of an Australian plant breeding program and has invested in the same since the 1970's. Locally adapted elite varieties and biotechnology are success stories that remains fundamental to underpinning the ability of the Australian cotton industry to remain competitive in the global marketplace. The increasing globalization of cotton traits and germplasm represents both opportunities and threats for the industry. The Corporation will be reviewing the focus of its ongoing investments to ensure that they advance the performance and competitive advantage of the Australian Cotton Industry.

Levels of investment in the Corporation's 'Value Chain' program continue to increase as the industry seeks to broaden the scope for adding value to Australian Cotton. The coming year will see the consolidation of the results from the cotton industry 'Pathways to Environmental Management Systems' project—which is seeking to extend the BMP program to the entire length of the production chain and associated work and which also aims to develop a brand for Australian cotton along the lines of its quality and environmental credentials.

In summary, this fifth and final AOP under the Strategic R&D Plan 2003-2008 details how CRDC shall respond to needs to consolidate its activities and R&D investments. Evaluation of the achievement of the R&D Plan outcomes and the impact of R&D investments will be an important focus.

Concurrently, the CRDC will finalise its successive Strategic Plan 2008-2013 in preparation for its implementation in 2008-09.

“...an upside of this situation it is an even greater focus on the uptake of R&D outputs”



Bruce Finney
Executive Director



Annual Operating Plan

ABOUT CRDC



OUR VISION

A globally competitive and responsible cotton industry

OUR MISSION

Invest and provide leadership in research, innovation, knowledge creation and transfer.

OUR OUTCOME

A more sustainable, profitable and competitive cotton industry providing increased environmental, economic and social benefits to regional communities and the nation.

BACKGROUND

The Cotton Research and Development Corporation (CRDC) was established in 1990 under the Primary Industries and Energy Research and Development Act 1989 (PIERD Act), which outlines its accountability to the Australian Government and to the cotton industry through the Australian Cotton Growers' Research Association (ACGRA).

CRDC is accountable to the Australian Government through the Minister for Agriculture, Fisheries and Forestry the Hon. Peter McGauran MP and the Parliamentary Secretary to the Minister, the Hon Sussan Ley MP.

CRDC is committed to fulfil its legislated charter to:

Invest in and manage an extensive portfolio of research, development and extension projects to enhance the ecological, social and economic values associated with cotton production systems and to benefit cotton industry participants, regional communities and the Australian community.

Fund and coordinate the development of technical and non-technical documents, guides and other information tools and coordinates workshops,

seminars and field days for a range of purposes, including research review and progression, information sharing or technology transfer to industry.

Produce a range of publications about corporate activities and operations and to disseminate research outcomes. It acts as a formal and informal information source for stakeholders and client groups and engages a broad range of media to effectively communicate with its many audiences.

CORPORATE STANDARDS

Under the CRDC Statement of Principles, the directors and staff:

Are committed to excellence and productivity,

Are committed to providing the highest levels of accountability to stakeholders,

Will act legally, ethically, professionally and responsibly in the performance of their duties,

Strive to maximise return on investment of industry and public funds invested through our corporation,

Strive to make a difference in improving the knowledge base for sustainable cotton production in Australia,

Value strategic, collaborative partnerships with research providers, other research and development bodies, industry organisations, stakeholders and clients, for mutual industry and public benefits, including cooperation with kindred organisations to address matters of National Research Priorities,

Value the contribution, knowledge and expertise of the people within our organisation and that of our contractual consultants, external program coordinators and research providers,

Promote active, honest and effective communication,

Are committed to the future of rural and regional Australia,

Comply with and promote best practice in corporate governance,

Are committed to meeting all statutory obligations and accountability requirements in a comprehensive and timely manner.

2007—2008

THE RURAL RESEARCH AND DEVELOPMENT CORPORATION MODEL

The Rural R&D Corporations (RDCs), including CRDC, take a leading national role in planning, investing in and managing research and development for their respective industries.

RDCs are not research “grant” agencies. Their enabling legislation requires them to treat R&D as an investment in economic, environmental and social benefits to their industries and to the people of Australia.

Rather than focusing mainly on generating new knowledge for its own sake, RDCs strive to deliver high rates of return on research and development investment by influencing the full range of interactions along the innovation chain.

Striving for high returns on investment also leads RDCs to apply significant resources to translating research outputs into practical outcomes.

RDCs are required to conduct their activities in accordance with strategic research and development plans and annual operational plans that take account of the needs of end-users and other stakeholders. The plans are approved at ministerial level.

Although RDCs fund basic research, a high proportion of activity is applied to research and development – both short-term and long-term.

RDCs are fully accountable to their major stakeholders and to the wider community.

COLLABORATION

CRDC is directly involved in joint or collaborative research efforts and ventures with many research organisations, including Grains Research & Development Corporation, Land and Water Australia, Horticulture Australia, Rural Industries Research & Development Corporation, the Murray-Darling Basin Commission and the Cooperative Research Centre for Irrigation Futures.

In addition, the Corporation is a key partner and investor in the Cotton Catchment Communities Cooperative Research Centre which began its operations in October 2005. CRDC will co-invest \$4 million per annum in CRC R&D programs for the next six years.

KEY RESEARCH PROVIDERS

- Cotton Catchment Communities CRC
- Australian and state government primary industry agencies (DPIs)
- CSIRO Divisions of Plant Industry, Entomology and Textile and Fibre Technology
- Universities
- Other Rural Research and Development Corporations
- Cooperative Research Centres
- Cotton Consultants Association
- Agribusinesses

The Rural R&D Corporations (RDCs), including CRDC, take a leading national role in planning, investing in and managing research and development for their respective industries.



Extension of R&D knowledge is a key responsibility of many Research Providers to CRDC.

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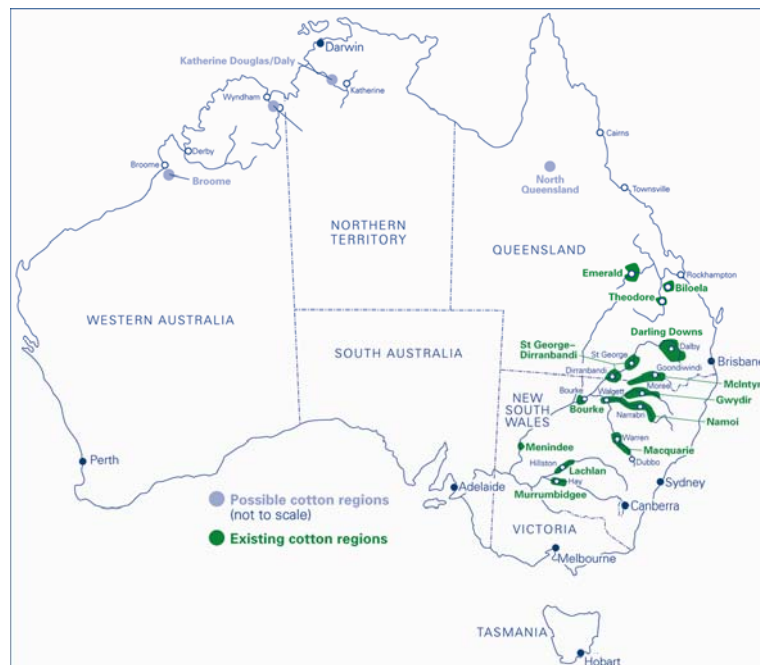
CRDC STRUCTURE

Executive Director

Bruce Finney

Administration	Communication	Program Management
Business & Finance General Manager	Communication Manager	Research & Extension General Manager
Robin Logan	Rohan Boehm	Bruce Pyke
Assistant Accountant Bernice Robertson		Research Program Managers Dallas Gibb Ian Taylor
Project Administration Manager Kara Taylor		Research Program Coordinator Helen Dugdale
Executive Assistant		
Administrative Assistants Karen Larsen		

THE AUSTRALIAN COTTON INDUSTRY



According to ABARE Australian Commodities Statistics, the five year average 2001-2005/6 annual gross value of Australian agricultural exports is A\$27.97b – of this, cotton represents A\$1.2b, or 4.3%.

Cotton is the most widely produced natural fibre in the world. It represents about 40 per cent of the world textile market.

In Australia, the cotton industry is relatively small with around 880 cotton enterprises currently producing the crop. Around 70 per cent of Australia’s cotton is grown in New South Wales and the majority of the remainder is grown in Queensland.

With the return of favourable seasons and higher per-bale returns, the capacity of experienced farmers not currently growing cotton is substantial and can readily result in greater production.

2007—2008

The typical Australian cotton farm is 4630 ha of which 362 ha is cotton and 2840 is dryland cropping or grazing. Cotton farms are highly mechanized, capital intensive, technologically sophisticated and require high levels of management expertise.

The average yield for irrigated cotton in Australia is 1800 kilograms per hectare—the highest in the world (Source: Cotton Australia, 2005). These figures can be attributed almost entirely to improved cotton breeding and better crop management systems, which have been achieved with a reduced impact on the environment.

The economic and environmental health of the industry can be largely attributed to high quality collaborative research and development, much of it coordinated and funded by the Corporation. Combine this culture of innovation and continuous improvement with practical implementation and willingness to adopt new ideas by growers, and you have an industry which is very quick to pick up and act upon new research outcomes.

Despite its relatively small size, the Australian cotton industry makes an important contribution to the national economy both in terms of exports and employment.

On a global scale, Australia is not a large producer—only around 3 per cent of the global crop is grown within Australia. Yet, Australia is one of the largest exporters of cotton in the world. Over 95 per cent of the national crop is exported.

The cotton industry directly employs an estimated 10,000 people under normal seasonal and market conditions.

The Australian cotton industry operates in an environment of intense global competition and must therefore continually improve operational efficiency, environmental sustainability and quality of the product if it is to remain competitive. That is why the continued R&D effort of the Corporation, in conjunction with its government and industry stakeholders, remains of paramount importance to the industry and an essential linkage in the maintenance of a viable industry and rural communities.

National production averages 2.5m bales produced

on 880 entities, and this equates to the average cotton farm producing 2840 bales at 7.84 bales/ha on their average 362 ha of cotton fields. The current 5-year average value per bale is \$432 and gross cotton income per farm is \$1.25m.

Cotton producers have other agricultural enterprises which are typically other summer crops such as sorghum, sunflowers, soy bean; while typical winter crops are cereals such as wheat and barley. Winter crops are typically supplemented by residual soil moisture together with nutrients remaining after a cotton crop.

Therefore, in a cropping system where cotton is the major crop, it would also sustain other crops in an integrated farming system designed to optimise natural rainfall events, soil fertility and irrigation.

Australian cotton farmers average yield is 1.78 tonnes / ha or 7.84 bales /ha of cotton and cotton seed combined.

The average yield for irrigated cotton in Australia is 1800 kilograms per hectare—the highest in the world.



Australian cotton enterprises are important contributors to regional and national economies.

Annual Operating Plan

WATER AND NATURAL RESOURCES



Cotton producers elect to grow cotton from the water allocations they have. Substantial water efficiency gains have been recorded and proven over the past 30 years by the cotton industry and this has been as a direct output of research and development. Across the industry, each hectare produces 238% more cotton now than it did in the 1970s and Australian cotton growers have improved yields by 18% in the past 10 years. The industry has targeted further efficiencies and plans to double water use efficiency in the next 10 years.

Cotton farmers spend more than any other agricultural industry on natural resource management - an average \$244,000 per farm per annum, compared to the average of \$28,000 (Source: Natural Resource Management Survey 2004-05, ABS)

Cotton growers have improved their water use efficiency by 11% since 1999, equivalent to water savings of 67,885 megalitres a year (Source: Rural Water Use Efficiency Final Report, Cotton CRC, 2003). Of the world's major cotton producing countries uses its water most efficiently (Source: Cotton CRC/CSIRO, 2003).

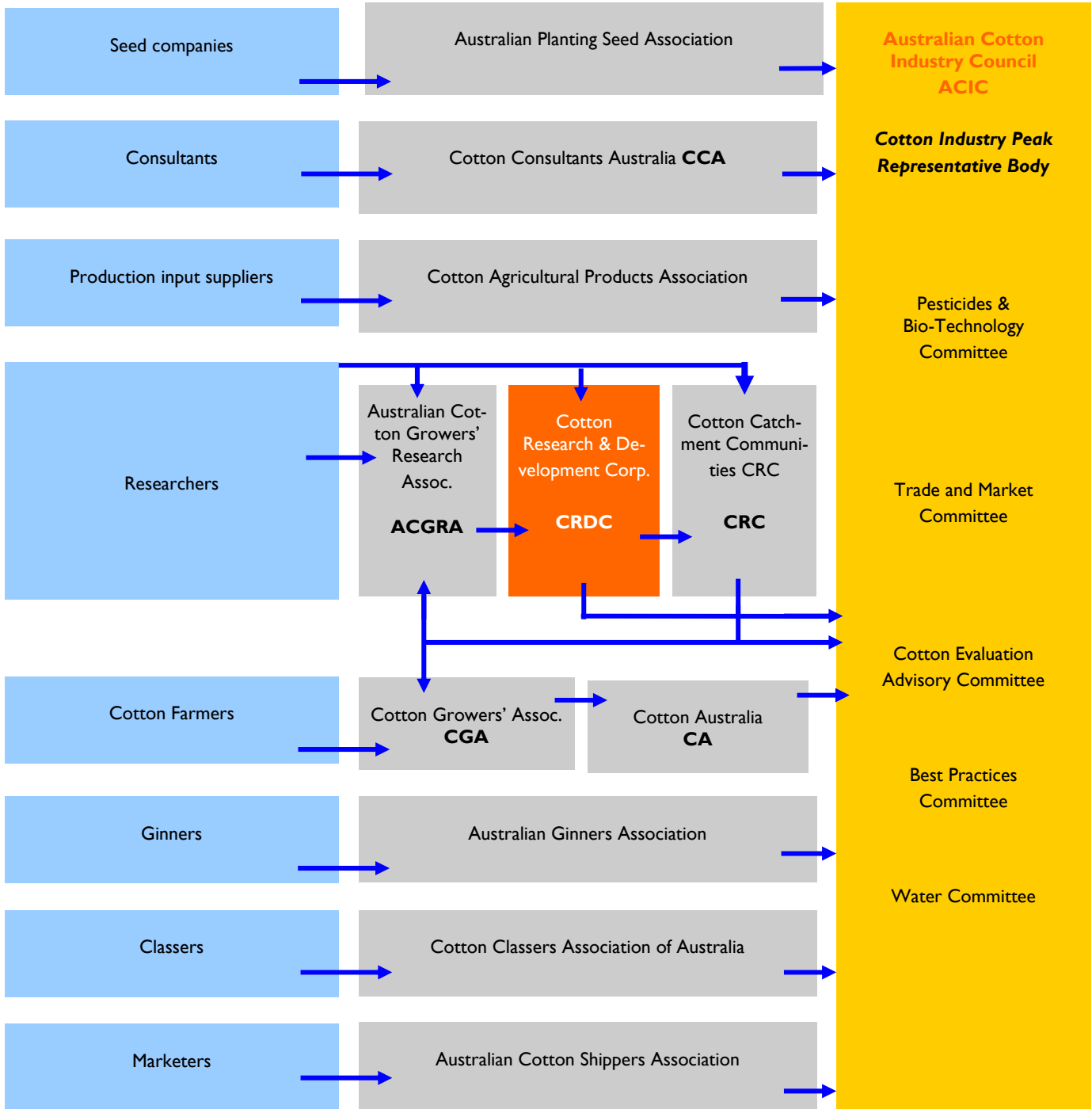
70% of irrigators implemented changes to improve irrigation practices over the past five years. 46% made the application system more efficient, 37% scheduled more efficiently and 15% invested in on-

farm soil water monitoring (Understanding Irrigation Decisions, Irrigation Insights Number 6)

On-farm water application is specifically timed to match the cotton crop's need for water, to reduce deep drainage and improve cotton's water use efficiency.



STRUCTURE OF THE AUSTRALIAN COTTON INDUSTRY



The Australian cotton industry has a highly developed structure.

Contained in this structure are the mechanisms where stakeholders generate input and contribution to the management of industry issues, its people and research; the product of which underpin the industry's sustainability and its capacity to be a major contributor to the economies of rural communities and the nation.

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ACHIEVING THE OUTCOMES

R&D INVESTMENT PROCESS

CRDC has a two part process to evaluate and make R&D investment decisions. A new online database system (Clarity) will be used to assess and manage R&D investments from the 2007-2008 call.

When the program is fully commissioned during 2007, the Clarity investment management program will allow CRDC manage all existing and future investments with the highest levels of probity while providing for in-depth analysis of its investment portfolios against a wide range of economic and management criteria to the benefit of industry stakeholders.

The two part process begins with calls for research applications for Preliminary Research Proposals (PRPs) nationwide using advertising in national newspapers, research publications and on the Corporation's website. This occurs in August-September each year, with September 1 being the deadline for the receipt of PRPs.

The second phase is where a PRP is judged to be in line with the Corporation's strategic priorities based on Government Research Priorities and industry policy. Applicants who can satisfy Stage 1 criteria are then requested to submit a full proposal by late January.

At an annual budget meeting in March, CRDC directors make final decisions regarding investments for nominated projects on the basis of a review of applications for new projects together with reports from continuing projects.

All projects are assessed and performance reviewed by the Corporation's industry stakeholder, the Australian Cotton Growers' Research Association (ACGRA). ACGRA also assesses and offers its recommendations on all preliminary and full research applications

Where necessary, CRDC commissions research to fill any identified gaps in the research program and where additional research projects may meet the needs of industry. The Board also sets aside an amount for contingencies, so that urgent research and development projects can proceed without undue delay.

TRIPLE BOTTOM LINE REPORTING

The CRDC Strategic Plan 2003-08 and Annual Operating Plans are formulated to implement the corporation's objectives and outcomes using a triple bottom line framework for planning, implementation and reporting. They deliver one integrated outcome via three outputs:

- Economic - Profitability and international competitiveness
- Environmental - Sustainable production systems and catchments
- Social - Empowered people and communities

In addition to the targets listed under each research program, the Corporation has developed targets that address its environmental, economic and social outputs. Unless specified otherwise, these targets extend to the end of the five-year strategic plan in 2008.

GOVERNMENT RESEARCH PRIORITIES

In December 2002, the Prime Minister released National Research Priorities categorised as:

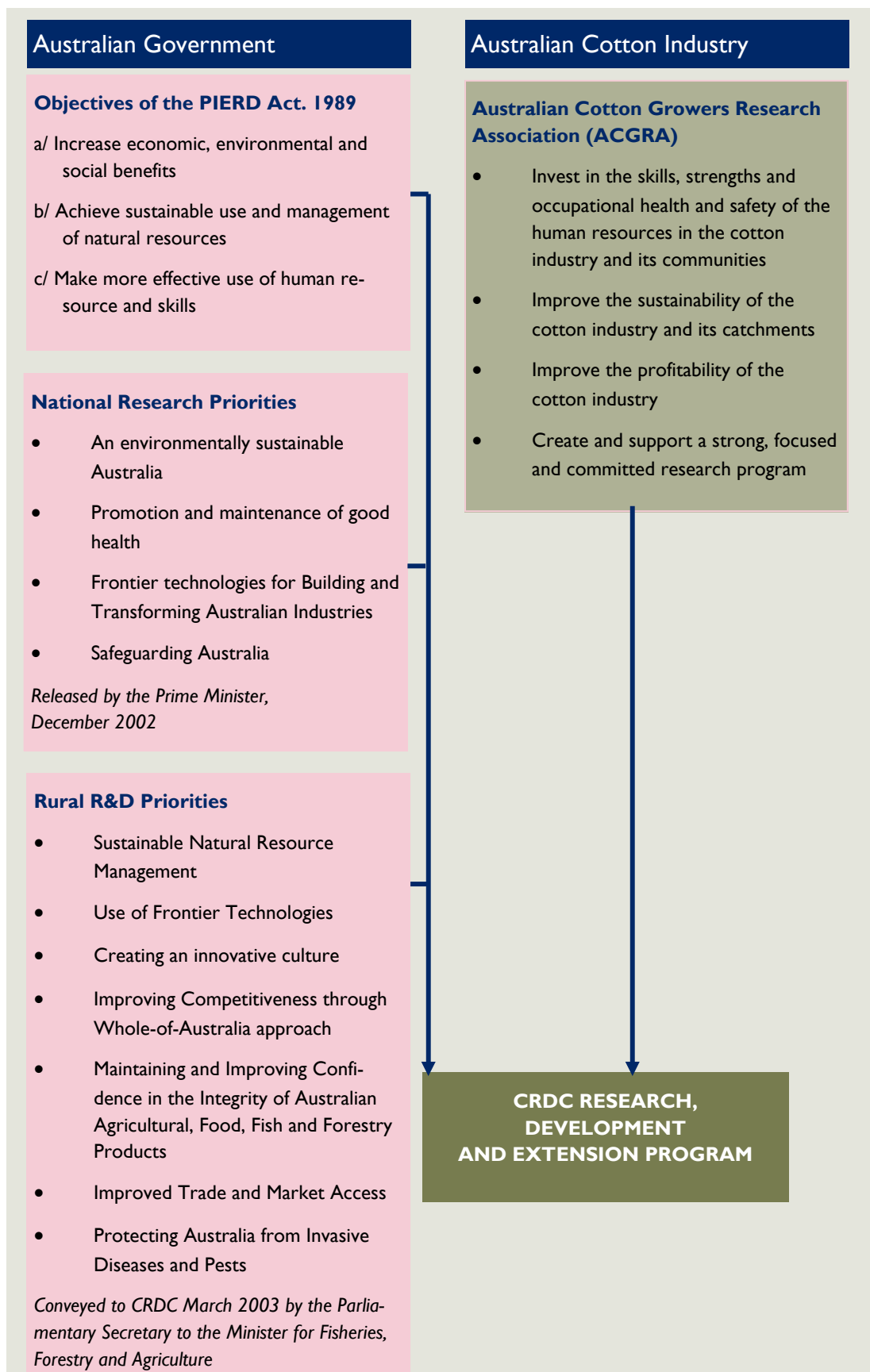
- An environmentally sustainable Australia
- Promoting and maintaining good health
- Frontier technologies for building and transforming Australian industries
- Safeguarding Australia

Following their release, the Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry wrote to the Corporation in March 2003 advising of revised Government priorities for rural research and development. These were:

- Sustainable natural resource management
- Improving competitiveness through a whole of industry approach
- Maintaining and improving confidence in the integrity of Australian agricultural food products
- Improved trade and market access
- Use of frontier technologies
- Protecting Australia from invasive diseases and pests

In March, CRDC directors make final decisions regarding investments for nominated projects

STAKEHOLDER R&D PRIORITIES



Provision for revised Government Research Priorities CRDC has been advised by Government that it intends to review the national research priorities during the currency of this Plan. While existing Government Research Priorities are being addressed currently by CRDC through adherence to its Five-year Strategic Plan 2003-2008 and interim directives of Government, the Corporation expects that it can and will take into account impacts and direction of any renewed Priorities as they are announced, and seek to adjust its R&D programs accordingly.

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ACHIEVING THE OUTCOMES

NATIONAL RESEARCH PRIORITY

An environmentally sustainable Australia

RURAL PRIORITY

Sustainable natural resource management

CRDC programs and strategies addressing these priorities are:

- Program 1 – People and Knowledge
- Program 2—Integrated Natural Resource Management
- Program 3 – Crop protection
- Program 4—Farming Systems
- Program 5—Plant Breeding and Biotechnology

New CRDC Investments

The Corporation will actively seek opportunities to co-invest and work collaboratively on a range of environmental issues with organisations such as the Cotton Catchment Communities CRC and catchment management bodies in both Queensland and New South Wales.

The coming year will see a comprehensive revision of the cotton industry's 'Best Management Practices' manual which will include:

- Technical information on better managing energy use and greenhouse emissions gained from current CRDC-funded research
- Updating legal and industry policy positions in regard to BMP guidelines
- A reduction in the information overlap between BMP modules
- An investigation into the viability of including Occupational Health and Safety in BMP which will include clarification in which OH&S is included in BMP
- Improving linkages of BMP to other industry environmental management systems, quality assurance programs and catchment management targets.
- More explicit linkages between R&D project outcomes and BMP objectives including introduction of an electronic (online) version of the BMP Manual

CRDC will actively seek opportunities to co-invest and work collaboratively on a range of environmental issues



2007—2008

NATIONAL RESEARCH PRIORITY

Promoting and maintaining good health

RURAL PRIORITY

Maintaining and improving confidence in the integrity of Australian agricultural, food, fish and forestry products

CRDC programs and strategies addressing these priorities are

- Program 1—People and Knowledge
- Program 2 – Integrated natural resource management
- Program 3—Crop Protection
- Program 5—Breeding and biotechnology
- Program 6—Value Chain

New CRDC Investments

Cotton is a fibre crop with oil as the only by-product for human consumption. CRDC-funded research has developed plants with higher oleic and stearic acid content – making them ‘healthier’ - and a business case has been prepared for the potential commercialisation of these products. The coming year will determine whether these products can be commercialized.

The development and subsequent commercialisation of insect and herbicide-tolerant varieties of cotton has led to major reductions in the use of insecticides and residual herbicides which has, in turn, a positive impact upon the health and safety of cotton industry workers and communities.

The Corporation plans to consolidate the value of its investment in the joint venture Farm Health and Safety R&D program and seek to identify any opportunities with its joint partners where potential for future joint activity in this important program can be continued.

NATIONAL RESEARCH PRIORITY

Frontier technologies for building and transforming Australian industries

RURAL PRIORITY

Use of frontier technologies

CRDC programs and strategies addressing these priorities

- Program 3—Crop Protection
- Program 4—Farming Systems
- Program 5—Breeding and biotechnology

New CRDC Investments

Plant breeding and biotechnology remain key drivers of the degree to which Australian cotton remains competitive in the global marketplace.

The role of the Corporation as a major contributor to this effort in 2007-08 and beyond will be subject to strategic review to ensure the direction of investment continues to best position the industry’s needs.

The industry will continue to benefit from outputs from this investment undertaken in previous years and these include improving agronomic tolerance, disease tolerance and the development of GM markers for both disease and fibre quality.

Commercialisation of insect and herbicide-tolerant varieties of cotton has led to major reductions in the use of insecticides and residual herbicides



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ACHIEVING THE OUTCOMES

NATIONAL RESEARCH PRIORITY

Safeguarding Australia

RURAL PRIORITY

Protecting Australia from invasive diseases and pests

CRDC program and strategies addressing these priorities

Program 3—Crop Protection

New CRDC Investments

The threat posed by cotton's major pest, Helicoverpa, has diminished with the increased uptake of biotechnology in the cotton industry. However the Corporation has reviewed its investment in resistance monitoring and management to ensure the efficacy of Bollgard® II technology is maintained. CRDC will continue to invest into the management of secondary pests such as aphids, silver leaf white fly and mirids.

Two soil-borne diseases, Fusarium wilt and Black Root Rot, remain particular threats in cotton. In the coming year, the Corporation will continue to invest in the prevention, diagnosis and management of Fusarium wilt, as well as maintaining levels of research on the agronomic management of Black Root Rot.

RURAL PRIORITIES

Improving competitiveness through a whole of industry approach

Improved trade and market access

CRDC programs and strategies addressing these priorities

Program 5—Breeding and biotechnology

Program 6—Value Chain

New CRDC Investments

Investments in this area aim to identify the various impacts on fabric quality throughout the whole value chain, as well as opportunities to improve quality, both to maintain Australian cotton at the premium end of the market and to differentiate it within that sector. In the coming year, CRDC will seek to streamline investment and maintain quality through improved agronomic management and understanding how this is linked to textile performance.

The coming year will see the consolidation of results emanating from the Australian Government-funded 'Pathways to Environmental Management Systems' project which was to develop mechanisms for the expansion of the BMP program along the entire length of the production chain. Further investment will be made in ginning and fibre measurement technologies to improve fibre quality. Investigations into the commercialisation of these technologies are expected to lead to a more diverse portfolio of R&D within this important area.

RURAL RESEARCH PRIORITY

Creating an innovative culture

CRDC program and strategies addressing this priority

Program 1—People and Knowledge

New CRDC Investments

Integration of BMP into extension and renewed capacity in the Extension Team will lead to further regionalisation of extension efforts. The focus of the coming year will be to increase co-ordination and promotion of extension team activities among the many providers.



Further investment will be made in ginning and fibre measurement technologies to improve fibre quality

Picture courtesy CSIRO

2007—2008

CRDC investments in the Cooperative Venture in Capacity Building (CVCB) will see renewed effort to include capacity building and evaluation as a core component of the extension effort. An extensive pilot program applying CVCB research within the “Fast Track” program and will see six individual projects skilling the industry personnel in Capacity Building and Mentoring.

The coming year will see the Corporation continue to invest in training and development of cotton industry personnel. This will include investment in the development of the future leaders of tomorrow through the Australian Rural Leadership Program, development and delivery of training courses such as the course for growers and consultants for irrigation and spray application management. Support for tertiary education as a foundation for capacity building shall be delivered through scholarships in the Cotton Course at UNE, Field to Fabric short course and development of Precision Ag training for tertiary students in cotton and grain.

Investment is to continue with successful programs such as the Australian Government Department of Agriculture Fisheries and Forestry Corporate Governance for Rural Women course and the Australian Government Science and Innovation Awards for Young People in Agriculture, Fisheries and Forestry.

An extensive pilot program applying CVCB research within the “Fast Track” program and will see six individual projects skilling the industry personnel in Capacity Building and Mentoring.

THE COMING YEAR

INDUSTRY OUTLOOK

This Plan is forged at a time when the Australian cotton industry faces a second season of unprecedented drought conditions.

At the end of the 2007 picking season, water storages were reduced to all-time low levels in most catchments. Faced with this, the Corporation is forecasting a total crop of 1.0 million bales for the 2007-08 crop. Above average winter and spring rains are the minimum requirement for 2007 to provide renewed levels of confidence that could result in farmers planting cotton crops. Decisions by experienced cotton farmers to plant sufficient areas to achieve an industry crop of over one million bales would be made in 2007 when water storages and farm dams return to sustainable levels and prices justified a decision to plant cotton.

FINANCIAL OUTLOOK

The Corporation is jointly funded by an industry levy of \$2.25 per bale (227 kilograms ex-gin) together with a matching contribution from the Australian Government.

This funding arrangement provides up to a maximum of 0.5 per cent of the gross value of production, or up to 50 per cent of expenditure, or not exceeding the contribution from grower levies.

As a result, the estimated 2006-07 cotton crop size of just over 1.0 million bales will significantly decrease bale levy receipts for both 2006-07 and 2007-08, while current low cotton prices and a forecast crop size of 1.0 million bales for 2007-08 will continue to constrain both industry levy and Australian Government contributions.

The Government’s general matching of industry contributions is expected to be limited to 0.5% of the cotton industry’s three-year average Gross Value of Production (GVP). Royalties from the sale of domestic and international planting seed and interest on investments provide further significant revenue streams, however royalty income is directly dependent upon the area planted.

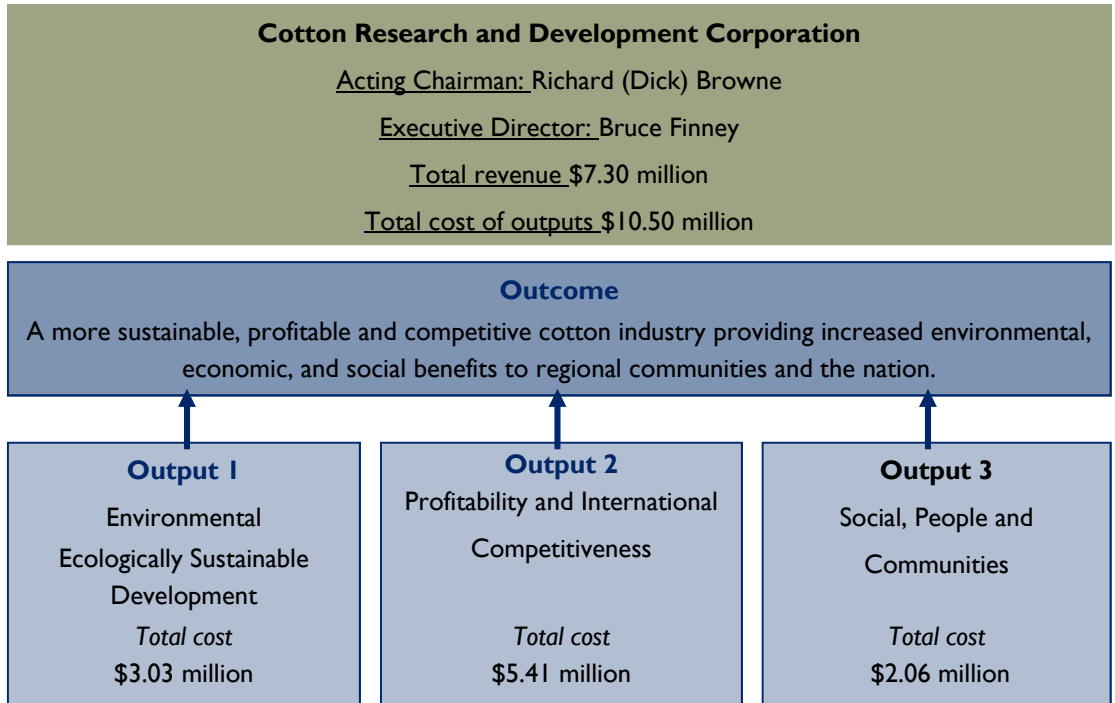
Collectively these sources of revenue amount to a revenue forecast of \$7.3m, a 30% fall from 2006-07 estimated revenue. This significant fall in revenue combined with a 14% reduction in expenditure is expected to result in a \$3.2m deficit to be funded from the Corporation’s reserves.

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ACHIEVING THE OUTCOMES

FINANCIAL COMMITMENT TO TRIPLE BOTTOM LINE OUTCOMES & OUTPUTS

Total cost is shown (right) rather than total price, because the Corporation is primarily funded through industry levies rather than on the basis of the price of their Outputs. It should be noted that the CRDC will use its accumulated reserves to fund the difference between total revenue and the total costs of outputs.

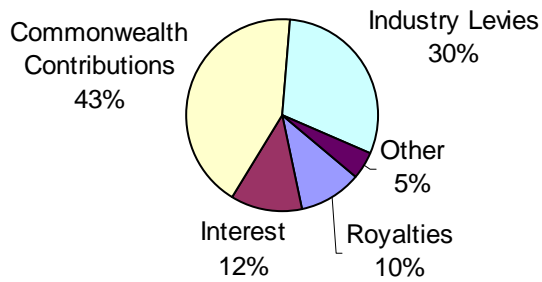


Total resources 2007–08

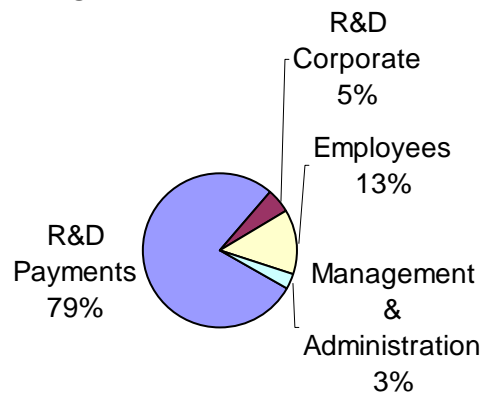
Source	Total resources \$'000
Funds from industry sources	
– Levies	2,194
Funds from Australian Government	
– Matching Government Contributions	3,109
Funds from other sources	1,997
Total resources	7,300

Photo courtesy CSIRO

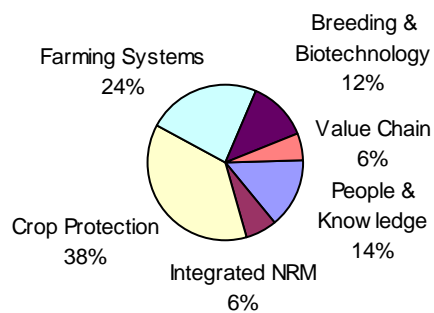
FORECAST REVENUE BY SOURCE



FORECAST EXPENDITURE BY TYPE



FORECAST EXPENDITURE BY PROGRAM



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ACHIEVING THE OUTCOMES

PLANNED R&D INVESTMENTS

The Corporation has allocated an investment of \$8.76 million, including commissioned research, to the Corporation's six R&D programs and Corporate R&D activities.

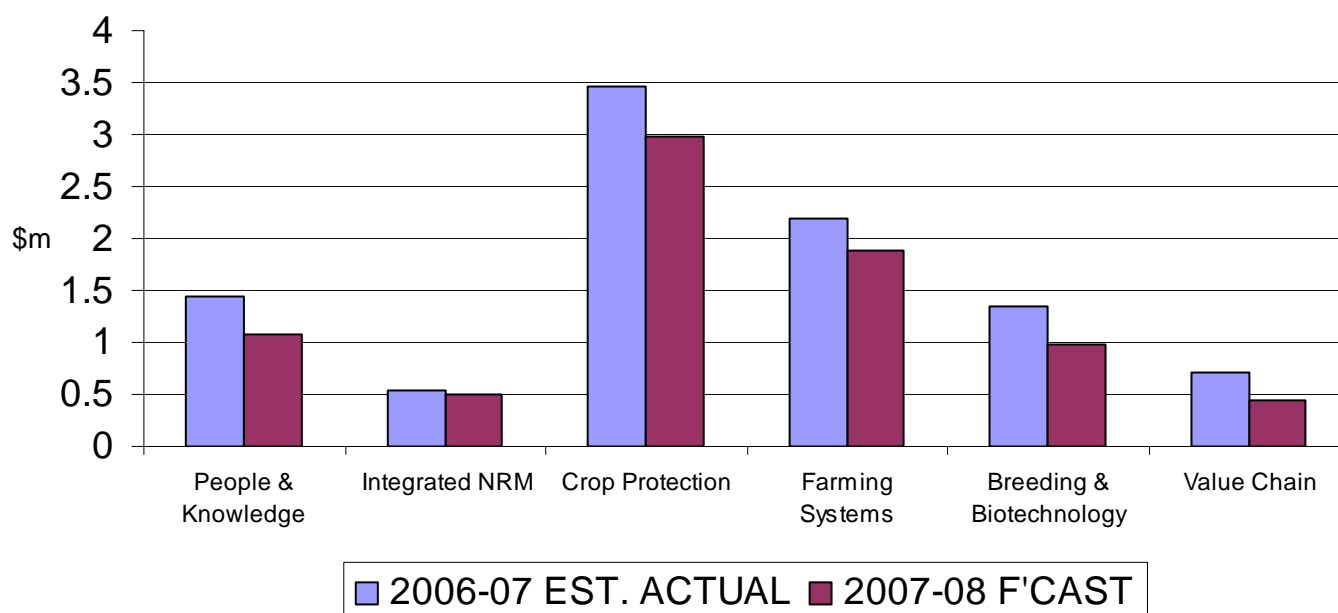
In order to ensure that the strategies and the measures of success contained in the current strategic plan are still of relevance to both industry and Government and to measure progress made against these measures over the past 12 months, the Corporation, its industry stakeholder, the Australian Cotton Growers Research Association (ACGRA), and other key cotton industry and government personnel reviewed the plan in February 2006. The outcome of this review was a range of updated priorities which are being used to guide the R&D investment portfolio for the coming year.

The Corporation has allocated an investment of \$8.76 million, including commissioned research, to the Corporation's six R&D programs. The Board has also set aside an amount for contingencies to allow urgent projects to proceed without delay should an emergency situation arise.

FORECAST EXPENDITURE BY PROGRAM

People & Knowledge	1,086,236
Integrated NRM	503,340
Crop Protection	2,974,674
Farming Systems	1,893,484
Breeding & Biotechnology	983,895
Value Chain	442,016
	<hr/> 7,883,645 <hr/>
Cotton CRC untied cash	100,000
Contingency and Corporate R&D activities	772,800
	<hr/> 8,756,445 <hr/>

EXPENDITURE BY PROGRAM 2006-07 ACTUAL VERSUS 2007-08 FORECAST



PROGRAM I—PEOPLE AND KNOWLEDGE

INPUT

\$1.09 million

Represents 12.4 per cent of total R&D expenditure

OBJECTIVE

Improving the capacity of industry and the community to use the knowledge and innovations gained through research and development. A continuing culture of innovation in the cotton industry, which creates viable rural communities

OUTCOME

Innovative people in the cotton industry and community, creating a sustainable industry and viable regional communities

Background

The capacity and the capability of the industry's workforce and communities continually improves while it acquires new skills and knowledge. The success of the cotton industry in Australia has been attributed to many factors, one of which is undoubtedly supporting people to conduct the research and transfer the outcomes. This remains a high priority for the Corporation for the coming year which will see finalization of the key recommendations from the 2005 Review of Extension and Training in the Cotton Industry.

STRATEGIES

Support and coordinate a highly trained, efficient and effective cotton extension team

Foster the professional development of innovative and highly trained researchers, extension and technical officers, administrators, consultants and growers

Foster the development of opportunities for women in the

Support the implementation of research and extension outcomes and shorten the time to adoption

Support the on-going development of information packages and tools that consolidate and disseminate research outcomes.

Promote safe, healthy workplaces through the investment in, and adoption of, appropriate Occupational Health and Safety work practices

Facilitate effective coordination and partnerships with research and development providers, industry and community organisations

Implement communication planning and evaluation guidelines into the design of all new research projects that can lead to optimized adoption and uptake of best practice. Implement formal evaluation measures on CRDC extension investments and leverage research and development investments in communication with resource, research and industry bodies external to CRDC.

MEASURES OF SUCCESS

Evaluation of outcomes of activities conducted by the extension team. Continuing studies to determine degree to which indicator technologies are being adopted by industry.

Evidence of improved skills and qualifications of researchers, extension and technical personnel, administrators, consultants and growers.

Women occupying industry roles in all segments of the industry.

Evidence through ongoing studies among targets which demonstrate adoption of research outcomes and improved practices is taking place in a targeted fashion.

Against benchmarks, search and prove evidence that the use of information packages and tools is a driver to adoption of research outcomes and improved practices.

The OH&S performance of industry workplaces is improving

Implementation of outcomes in partnership with a variety of research and development providers.

Ongoing progress in adoption levels of the major indicator best practices, increased joint communication and extension activity.

Evidence of spillover of CRDC funded research into 'public good' benefits.

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ACHIEVING THE OUTCOMES

STRATEGIES

Support and coordinate a highly trained, efficient and effective cotton extension team.

Foster the professional development of innovative and highly trained researchers, extension and technical officers, administrators, consultants and growers

A continually improving culture of innovation and increased skill level in scientists, advisers and growers

Support the implementation of research and extension outcomes to shorten the time to adoption.

Support the on going development of information packages and tools that consolidate and disseminate research outcomes

Promote safe, healthy workplaces through the adoption of appropriate Occupational Health and Safety work practices



PLANNED R&D INVESTMENTS

Further develop the scope and reach of the extension team – this will include an increased focus on integration of BMP and regionalized extension activities managed by the CRC.

Further develop, adapt and adopt key outputs from the Cooperative Venture for Capacity Building.

Continue to invest in a cotton training coordinator to develop and support a range of training activities

Provide funding towards a cotton industry scholarship in the Australian Rural Leadership Program

Contribute towards the Australian Government Science and Innovation Awards for Young People in Agriculture, Fisheries and Forestry

Contribute towards scholarships and international scientific exchanges including support for researchers to attend the World Cotton Research Conference, Lubbock, Texas in September 2007.

Fund new post-graduate and post-doctoral positions and provide opportunities for new and existing scholarship holders to upgrade knowledge and skills in areas such as report writing, communications and intellectual property management

Further development and enhancement of the BMP manual with revised modules that identify the position for appropriate decision support tools.

Develop improved linkages with Cotton Consultants Australia to engage their membership more directly with the industry's desire for improved implementation of research and extension, BMP adoption and collection of vital industry production and management data.

Respond to evidence of adoption of best practice in cotton production and employ appropriate measures to raise adoption practices that exists on the better farms and value adding enterprises in the value chain.

Continued support for Spray Drift Management and Prevention training courses in conjunction with the Grains Research and Development Corporation.

Review investment in the joint venture Farm Health and Safety R&D program, managed by the Rural Industries Research and Development Corporation and implement adoption strategies in for improved observance of OH&S practices on farm and in the value chain.

Identifying the appropriate level for Occupational Health and Safety in BMP.

PROGRAM 2—INTEGRATED NATURAL RESOURCE MANAGEMENT

INPUT

\$0.5 million Represents 6 per cent of total R&D expenditure

OBJECTIVE

Improved delivery of research, knowledge and management strategies related to natural resources that enhance the ecological, social and economic values associated with cotton production systems, both on and off farm, and reduce negative environmental impacts

OUTCOME

Increased ecosystem health, community wellbeing and economic wealth of cotton growing regions and a reduction in the negative environmental impacts of cotton production systems.

Background

Natural Resource Management continues to be strategic focus for CRDC over recent years. An increased R&D effort in a range of areas from field to catchment scale has led to many growers finding they are willing to adopt new technologies and new practices which has led to far reaching improvements in pesticide use and pest management, as well as improvements in water use, vegetation and land management, waste recycling and disposal, wildlife management and biodiversity.

There is little doubt that innovations in research and development have brought about a new era of environmental standards and performance in the Australian cotton industry. The coming year sees a continued focus on the integration of the cotton industry's Best Management Practices (BMP) with related NRM and farm management R&D outcomes and to strengthen the relevance of the BMP modules to everyday farming decision making, as well as for meeting community and industry stated objectives and outcomes.

STRATEGIES

Incorporate a broader range of environmental issues in the Cotton BMP program, and facilitate their adoption

Investigate and evaluate environmental management systems as an industry-led approach to improved natural resource management

Support multi-disciplinary approaches to developing farm management strategies that complement catchment and landscape outcomes in relation to salinity, water quality and quantity, and biodiversity

Facilitate the necessary environmental impact research for any new transgenic traits introduced into cotton varieties

Investigate the potential impact of climate change on cotton production, benchmark the industry's contribution to greenhouse gas emissions, energy use, and develop integrated management strategies to reduce emissions

MEASURE OF SUCCESS

Increased adoption and broader environmental coverage of the Cotton BMP program

An evaluation of environmental management systems as a farm and natural resource management tool

Improved trends in landscape and catchment indicators such as salinity, water quality and biodiversity. Project and funding links with other catchment and landscape programs related to biophysical targets and sustainability. Improved perception of cotton production by the community

Publication of refereed environmental impact research in scientific journals related to new transgenic traits

Benchmarked greenhouse gas emissions, energy use and potential climate change impacts

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ACHIEVING THE OUTCOMES

Planned R&D Investments – Program 2

STRATEGIES

Investigate and evaluate environmental management systems as an industry-led approach to improved natural resource management

Incorporate a broader range of environmental issues in the Cotton BMP program, and facilitate their adoption

Support multi-disciplinary approaches to developing farm management strategies that complement catchment and landscape outcomes in relation to salinity, water quality and quantity, and biodiversity

Facilitate the necessary environmental impact research for any new transgenic traits introduced into cotton varieties

Investigate the potential impact of climate change on cotton production, benchmark the industry's contribution to greenhouse gas emissions, energy use, and develop integrated management strategies to reduce emissions

PLANNED R&D INVESTMENTS

The coming year will see a comprehensive revision of the cotton industry's 'Best Management Practices' manual which will include:

- Technical information on better managing energy use and greenhouse emissions, gained from current CRDC-funded research
- Updating legal and industry policy positions in regard to BMP guidelines
- A reduction in the information overlap between BMP modules
- An investigation into the viability of including Occupational Health and Safety in BMP which will include clarification in which OH&S is included in BMP
- Improving linkages of BMP to other industry environmental management systems, quality assurance programs and catchment management targets
- More explicit linkages between R&D project outcomes and BMP objectives

Introduction of an electronic (online) version of the BMP Manual

Continued investment in research into understanding deep drainage and its implications for soil salinity, water quality and water allocations in relation to environmental flows

Continue to monitor the environmental performance of Bollgard® II and Roundup Ready Flex technology.

Continued investment into benchmarking and reducing greenhouse gas emissions and improving resource use efficiency including the potential including improved management practices into the BMP manual.



2007—2008

PROGRAM 3—CROP PROTECTION

INPUT

\$2.97 million Represents 34 per cent of total R&D expenditure

OBJECTIVE

Improved integrated management of major pests, weeds and diseases, reflected by continued reductions in chemical insecticide and residual herbicide inputs to crops, and responsible management of transgenic technology

OUTCOME

Continued reduced reliance on chemical inputs and more effective management strategies for pests, weeds and diseases

Background

The Australian cotton industry was the first broadacre agricultural industry in this country to move successfully to the commercial use of biotechnology. This has seen the emergence of new challenges and new opportunities which need to be addressed through a sustained and targeted R&D effort. As has been foreshadowed in previous plans, a change in focus from the management of traditional cotton pests will move to secondary insect pests such as silverleaf whitefly and mirids. A sustained focus on the control of Fusarium wilt and Black Root Rot is required as will research in best practice surrounding introduction of Monsanto's Roundup Ready Flex. This improved version of Roundup Ready glyphosate-tolerant cotton varieties allows broader weed control measures owing to a flexible window for Roundup application.

STRATEGIES

Improve integrated non-chemical and chemical management of insect and mite pests

Improve integrated non-chemical and chemical management of weeds

Develop practices and technologies that reduce the spread and impact of cotton diseases

Ensure the development of resistance is minimised through the design and implementation of resistance management strategies for both insecticides and transgenic technologies

Ensure the benefits of transgenic crop technology are maximised through responsible management based on sound scientific risk assessment

STRATEGIES

Improve integrated non-chemical and chemical management of insect and mite pests

Ensure the development of resistance is minimised through the design and implementation of resistance management strategies for both insecticides and transgenic technologies

Ensure the benefits of transgenic crop technology are maximised through responsible management based on sound scientific risk assessment

Improve integrated non-chemical and chemical management of weeds

Develop practices and technologies that reduce the spread and impact of cotton diseases

MEASURES OF SUCCESS

Evaluations on the adoption and outcomes of integrated practices, products and technologies, which improve returns, continual reduction in chemical control measures on farm, reduce on and off site environmental impacts as well as any social outcomes

Evaluation on the adoption and outcomes of integrated practices, products and technologies, which improve returns, use less chemicals, reduce on and off site environmental impacts as well as any social outcomes

Reduced distribution, presence and impact of diseases

Monitor resistance levels with an aim to either avoid or keep resistance levels in pests and weeds at manageable levels

Transgenic crop surveys and reports on performance, management and risk assessment

PLANNED R&D INVESTMENTS

Continue focus on the development of integrated pest management techniques for secondary pests, including mirids, silverleaf whitefly and aphids

Renewed investment in resistance monitoring and understanding of resistance mechanisms for conventional chemistry and Bollgard® II

Continued research into the development of improved refuge options and management for Bollgard® II

Continued research into weed control and herbicide application for Roundup Ready Flex.

Continued development of weed management strategies for key problem weeds in the cotton /grains farming systems

Renewed investment in support for research on the prevention, diagnosis and management of Fusarium wilt

Continued research on agronomic management strategies for Black Root Rot and other diseases

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ACHIEVING THE OUTCOMES

PROGRAM 4—FARMING SYSTEMS

INPUT

\$1.89 million Represents 22 per cent of total R&D expenditure

OBJECTIVE

Integrated farm management practices that enhance the sustainability and profitability of cotton farming systems

OUTCOME

A more sustainable and profitable cotton farming system

Background

Australia's cotton industry seeks to maintain economic viability to allow its growers to adopt the most appropriate and sustainable farming systems. Continuing drought conditions occurring at the same time as suppressed prices (returns per bale) exert great economic pressure on the industry. The Corporation's R&D effort continues to consolidate the value of its existing research into sustainable farming systems while crop sizes remain low primarily as a result of drought in all production areas.

Input costs continue to rise. Combating this, ready adoption of new GM cotton varieties together with better understanding and uptake of integrated management systems involving pests, soils and weeds, couple with the opportunity to reduce chemical inputs and the overall cost of production on a per-bale basis. R&D investment decisions also aim to increase water use efficiency while achieving more consistent and higher yields that also result in improved cotton quality.

Economic factors outside the realm of CRDC's influence continue to exact economic pressure on cotton farms. Among the more prominent of these factors are greater costs for land, water, energy, machinery and labour.

The Corporation looks to R&D investment decisions that lead to adoption of best practice to achieve a more sustainable and profitable cotton farming system while also delivering economic, social and environmental benefits to the Australian community.

STRATEGIES

Improve water use efficiency on farms using existing and new infrastructure, new tools and technologies

Understand salinity, sodicity and deep drainage on farms and develop appropriate farm management strategies to minimise these potential negative processes

Strengthen our understanding of soil health and improve crop nutrition management

Increase profitability with better whole farm management strategies and innovative precision agricultural systems

Continue fundamental research on cotton agronomy and plant physiology and explore the interactions of different components for both conventional and transgenic varieties

MEASURE OF SUCCESS

Increased yield per hectare and per megalitre of water;
Improved water use efficiency on farms

Adoption of integrated management options for salinity and sodicity

Benchmark of soil health characteristics and optimise crop nutrition management

Improved economic returns to farmers
Data on changed farming practices including the economic, environmental or social benefits

Publication of cotton research knowledge assets related to crop physiology and transfer of agronomic knowledge into other research and extension project outcomes

Planned investments—Program 4

STRATEGIES

Improve water use efficiency on farms using existing and new infrastructure, new tools and technologies
Consolidate investment in water use efficiency practices and technologies and support irrigation extension delivered through the Cotton CRC. Progressively evaluate extension delivery

Develop appropriate farm management strategies to minimise impact of salinity, sodicity and deep drainage on farms

Strengthen our understanding of soil health and improve crop nutrition management

Increase profitability with better whole farm management strategies and innovative precision agricultural systems

Continue fundamental research on cotton agronomy and plant physiology.
Continue exploration of the interactions for both conventional and transgenic varieties in agronomy and plant physiology

PLANNED R&D INVESTMENTS

This program will continue to target whole farm water use efficiency and profitability and will seek to develop more direct linkages to BMP
Continued investment in the activities of the Water Extension Team

Continue investment leading to adoptable techniques to minimize deep drainage
Monitor and evaluate farm and catchment scale adoption of best practice techniques that minimise impacts

Continue investment in Healthy Soils for Sustainable Farms Program in conjunction with a number of Catchment Management Authorities through the CRC
Increased investment in a broader crop nutrition program in collaboration with the CRC

Extend knowledge through Regional Farming Systems Forums in a number of cotton growing districts.
Develop potential to link other RDC activity such as GRDC Update program to extend knowledge and adoption of best practice
Identify opportunities for improved extension and training programs for precision agriculture in conjunction with Cotton CRC

Continue to investigate agronomic requirements for Bollgard® II varieties with particular reference to nutrition and water needs
Continue research into agronomic management for Roundup Ready Flex



PROGRAM 5—PLANT BREEDING AND BIOTECHNOLOGY

INPUT

\$0.98 million Represents 11 per cent of total R&D expenditure

OBJECTIVE

World leading cotton varieties displaying continuous improvement in cotton yield, quality and agronomic performance through plant breeding and biotechnology innovations

OUTCOME

Continually improving cotton varieties

Background

The Australian cotton industry enjoys new varieties that display higher yield and quality as well as improved insect and disease tolerance and herbicide resistance and the industry maintains a viable return on its investment from improvements through plant breeding. The contributions made through plant breeding and biotechnology are expected to continue in an evolved relationship between

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ACHIEVING THE OUTCOMES

PROGRAM 5—PLANT BREEDING AND BIOTECHNOLOGY (cont.)

STRATEGIES

Continue to develop regionally adapted cotton varieties exhibiting improved yield, quality, insect and disease resistance and herbicide tolerance

Solving production and quality constraints confronting the Australian cotton industry through a targeted, innovative biotechnology focus

Investigation of the role of improved or novel genes into elite cotton varieties through the development of frontier technologies

Monitor market signals in textiles and oilseeds to ensure Australian varieties maintain or elevate their place in the high-quality end of the market



MEASURES OF SUCCESS

Evidence that new cotton varieties are increasing yields and potential returns to the industry

Evidence that new varieties can produce higher yields with lower inputs of chemicals and improved water use efficiency

Evidence that biotechnology investments are delivering industry or community benefits

Evidence of genes that may benefit Australian cotton varieties

Market reports and economic analysis detailing demand for cotton lint and seed that can be produced by the Australian industry

Planned R&D Investments—Program 5

STRATEGIES

Develop regionally adapted cotton varieties exhibiting improved yield, quality, insect and disease resistance and herbicide tolerance

Targeted, innovative biotechnology focused on solving production and quality constraints confronting the Australian cotton industry

Reduction in time required to introduce improved or novel genes into elite cotton varieties through the development of frontier technologies, without compromising scientific rigour
Continuous monitoring of the signals from cotton textile and oilseed marketplace to ensure Australian varieties maintain a place at the high quality end of the market

(Investments addressing this strategy can also be found in program six 'Value Chain')

PLANNED R&D INVESTMENTS

Identify new opportunities for collaborative investment with CSIRO PI and other partners

Identify new opportunities for collaborative investment with CSIRO PI and other partners

Continued investment in the 'CottTech' joint venture with CSIRO and Cotton Seed Distributors (CSD)

Continue to support the Australian Cotton Shippers Association (ACSA) report on crop quality against internal market demands

Maintain levels of support into the assessment of contamination levels in Australian cotton

2007—2008

PROGRAM 6—VALUE CHAIN**INPUT**

\$0.44 million Represents 5 per cent of total R&D expenditure

OBJECTIVE

To produce high quality consumer preferred cotton and develop new international and domestic market opportunities

OUTCOME

High quality consumer preferred Australian cotton in the world marketplace

Background

Australian cotton continues to compete at the premium end of the world market. It has achieved this through Australian varieties that produce cotton fibre with the strength, length, fineness and maturity sought by spinners. Combine these with excellent agronomic practices producing consistent high quality and efficient ginning and shipping systems that deliver cotton on time. The coming year sees a continuation of funding for this program and this reflects the importance of improving and maintaining fibre quality and adding value to cotton and its by-products.

STRATEGIES

A breeding program that releases varieties with high quality fibre characteristics, which satisfy consumer demand trends. To investigate the use of biotechnology to enhance other traits, for example, nutritionally improved cotton-seed oil

To promote agronomic and management practices, including the Cotton BMP program, which preserve and protect optimal fibre quality characteristics

Ginning improvements resulting from research to reduce nep generation and to preserve desirable fibre qualities

The development of more accurate and repeatable technology of fibre measurement for neps, fineness, maturity and other fibre characteristics. Support changes to the traditional classing system, which better identifies and rewards superior fibre characteristics

To support efforts to develop new markets and high premiums for Australian raw cotton as well as value adding cotton in Australia

MEASURE OF SUCCESS

Release of varieties with appropriate fibre and seed characteristics

Evidence of improved practices that preserve fibre quality.

Extension of the Cotton BMP program to post farm gate issues

Improved ginning practice measured by ginning data

Proportion of the crop objectively measured by High Volume Instrument (HVI) increased.

Release of new fibre measurement technology

Number of unsold stocks accumulated and increased relative premium of Australian cotton compared to competitors. Demonstration of value added developments in Australia



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ACHIEVING THE OUTCOMES

Planned R&D Investments Program 6

STRATEGIES

Develop regionally adapted cotton varieties exhibiting improved yield, quality, insect and disease resistance and herbicide tolerance

Targeted, innovative biotechnology focused on solving production and quality constraints confronting the Australian cotton industry

Reduction in time required to introduce improved or novel genes into elite cotton varieties through the development of frontier technologies, without compromising scientific rigour

Continuous monitoring of the signals from cotton textile and oilseed marketplace to ensure Australian varieties maintain a place at the high quality end of the market

Investments addressing this strategy can also be found in program five

PLANNED R&D INVESTMENTS

Identify new opportunities for collaborative investment with CSIRO PI and other partners

Identify new opportunities for collaborative investment with CSIRO PI and other partners

Continued investment in the 'CottTech' joint venture with CSIRO and Cotton Seed Distributors (CSD)

Continue to support the Australian Cotton Shippers Association (ACSA) report on crop quality against internal market demands

Maintain levels of support into the assessment of contamination levels in Australian cotton



I Budgeted departmental income statement (for the period ended 30 June)

	Estimated actual 2006–07 \$'000	Budget estimate 2007–08 \$'000	Forward estimate 2008–09 \$'000	Forward estimate 2009–10 \$'000	Forward estimate 2010–11 \$'000
INCOME					
Revenue					
Revenues from government	8,152	5,303	5,920	7,778	8,445
Interest	925	900	660	605	605
Rents	15	15	15	15	15
Royalties	950	762	871	654	435
Other	348	320	420	420	420
Total revenue	10,390	7,300	7,886	9,472	9,920
Total income	10,390	7,300	7,886	9,472	9,920
EXPENSE					
Employees	1,277	1,386	1,442	1,499	1,559
Suppliers	318	295	302	313	322
Grants	10,727	8,756	8,332	8,221	8,175
Depreciation and amortisation	37	62	61	53	48
Total expenses	12,360	10,499	10,137	10,086	10,104
Surplus (Deficit) before in- come tax	-	-	-	-	-
Income tax expense	-	-	-	-	-
Surplus (deficit) attributable to the Australian Govern- ment	(1,970)	(3,199)	(2,251)	(614)	(184)

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2 Budgeted departmental balance sheet (as at 30 June)

	Estimated actual 2006–07 \$'000	Budget estimate 2007–08 \$'000	Forward estimate 2008–09 \$'000	Forward estimate 2009–10 \$'000	Forward estimate 2010–11 \$'000
ASSETS					
Financial assets					
Cash and equivalents	12,720	9,860	7,794	7,200	7,044
Trade and other receivables	1,000	719	580	580	580
Other	300	300	250	250	250
Total financial assets	14,020	10,879	8,624	8,030	7,874
Non-financial assets					
Land and buildings	496	487	490	494	499
Infrastructure, plant and equipment	236	226	231	217	194
Total non-financial assets	732	713	721	711	693
Total assets	14,752	11,592	9,345	8,741	8,567
LIABILITIES					
Provisions					
Employees	200	220	230	240	250
Total provisions	200	220	230	240	250
Payables					
Suppliers	87	106	100	100	100
Grants	600	600	600	600	600
Total payables	687	706	700	700	700
Total liabilities	887	926	930	940	950
Net assets	13,865	10,666	8,415	7,801	7,617
EQUITY^a					
Reserves	135	135	135	135	135
Retained surpluses or accumulated deficits	13,730	10,531	8,280	7,666	7,482
Total equity	13,865	10,666	8,415	7,801	7,617
Current assets	14,021	10,879	8,624	8,030	7,874
Non-current assets	732	713	721	711	693
Current liabilities	687	706	700	700	700
Non-current liabilities	200	220	230	240	250

3 Budgeted departmental statement of cash flows (as at 30 June)

	Est. actual 2006–07 \$'000	Budget est. 2007–08 \$'000	Forward est. 2008–09 \$'000	Forward est. 2009–10 \$'000	Forward est. 2010–11 \$'000
OPERATING ACTIVITIES					
Cash received					
Appropriations	8,410	5,754	5,970	7,779	8,445
Interest	600	900	710	605	605
Other	1,914	2,073	2,354	2,011	1,767
Total cash received	10,924	8,727	9,034	10,395	10,817
Cash used					
Employees	1,277	1,360	1,432	1,490	1,550
Suppliers	230	283	309	313	322
Grants	12,269	8,756	8,332	8,221	8,174
Other		1,146	958	923	897
Total cash used	13,776	11,545	11,031	10,947	10,943
Net cash from or (used by)					
operating activities	(2,852)	(2,818)	(1,997)	(552)	(126)
INVESTING ACTIVITIES					
Cash used					
Purchase of property, plant and equipment	177	43	69	42	30
Total cash used	177	43	69	42	30
Net cash from or (used by)					
investing activities	(177)	(43)	(69)	(42)	(30)
Net increase or (decrease)					
in cash held	(3,029)	(2,861)	(2,066)	(594)	(156)
Cash at the beginning of the reporting period	15,750	12,721	9,860	7,794	7,200
Cash at the end of the reporting period	12,721	9,860	7,794	7,200	7,044

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4 Departmental statement of changes in equity summary of movement (Budget year 2007-08)

	Retained earnings	Asset revaluation reserve	Other reserves	Contributed equity/capital	Total equity
	\$'000	\$'000	\$'000	\$'000	\$'000
Opening balance as at 1 July 2007					
Balance carried forward from previous period	13,730	135	-	-	13,865
Adjustment for changes in accounting policies	-	-	-	-	-
Adjusted opening balance	13,730	135	-	-	13,865
Income and expense					
Income and expenses recognised directly in equity:					
Gain/loss on revaluation of property	-	-	-	-	-
Sub-total income and expense	-	-	-	-	-
Surplus (deficit) for the period	(3,199)	-	-	-	(3,199)
Total income and expenses recognised directly in equity	(3,199)	-	-	-	(3,199)
Transactions with owners					
Distribution to owners					
Contribution by owners					
Sub-total transactions with owners	-	-	-	-	-
Transfers between equity components	-	-	-	-	-
Estimated closing balance as at 30 June 2008	10,531	135	-	-	10,666

5 Departmental capital budget statement

	Estimated Actual 2006-07 \$'000	Budget Estimate 2007-08 \$'000	Forward Estimate 2008-09 \$'000	Forward Estimate 2009-10 \$'000	Forward Estimate 2010-11 \$'000
Purchase of non financial assets					
Funded by capital appropriation	-	-	-	-	-
Funded internally by departmental resources	177	43	69	42	30
Total	177	43	69	42	30

6 Departmental property, plant, equipment and intangibles — summary of movement

	Land	Buildings	Other infrastructure plant & equip- ment	Computer software	Total
	\$'000	\$'000	\$'000	\$'000	\$'000
As at 1 July 2007					
Gross book value	130	375	108	157	770
Accumulated depreciation	-	9	16	12	37
Opening net book value	130	366	92	145	733
Additions:					
by purchase	-	-	23	20	43
Depreciation/amortisation expense	-	9	20	33	62
Other movements	-	-	-	-	-
Disposals:					
other disposals	-	-	-	-	-
As at 30 June 2008					
Gross book value	130	375	131	177	813
Accumulated depreciation	-	18	36	45	99
Estimated closing net book value	130	357	95	132	714

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Appendix A
Total Investment – Composition of Government Research Priorities attributed to each R&D Program (\$ and % values*)
2007-08 R&D Expenditure estimates across Rural Research Priorities (\$'000)

Rural Research & Development Priorities (RRDP)	Sustainable Natural Resource Management		Improving Competitiveness through a Whole of Industry Approach		Maintaining & Improving Confidence in the Integrity of Australian Agricultural, Food, Fish and Forestry Products		Improved Trade and Market Access		Use of Frontier Technologies		Creating an Innovative Culture		Protecting Australia from Invasive Diseases and Pests		Other Research		Total			
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%		
Program 1	221		121		50		3		299		393		0		1086	100			1086	100
Program 2	247		7		15		4		113		117		0		503	100			503	100
Program 3	242		0		0		0		1321		1387		24		2975	100			2975	100
Program 4	247		36		29		265		659		640		0		1893	100			1893	100
Program 5	79		92		0		140		375		298		0		984	100			984	100
Program 6	0		43		0		145		164		90		0		442	100			442	100
Total Expenditure	1054		300		93		557		2931		2925		24		7884	100			7884	100

Appendix B
 Total Investment – Composition of Government Research Priorities attributed to each R&D Program (\$ and % values*)
 2007-08 R&D Expenditure estimates across NRP Goals* (\$'000)

National Research Priorities (NRP)	<u>An Environmentally Sustainable Australia</u>							<u>Promoting and Maintaining Good Health</u>							<u>Frontier Technologies for Building and Transforming Australian Industries</u>							Safeguarding Australia					Total
	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5						
Program 1	87	30	73	7	22	0	1.5	0	0	0	174	231	92	0	46	321	0	0	0	0	0	1086					
Program 2	97	33	82	8	25	0	1.7	0	0	0	25	77	31	0	15	107	0	0	0	0	0	503					
Program 3	95	33	80	8	25	0	1.6	0	0	0	0	905	362	0	181	1259	0	0	24	0	0	2975					
Program 4	104	36	88	9	27	0	1.8	0	0	0	329	434	174	0	87	604	0	0	0	0	0	1893					
Program 5	31	11	26	3	8	0	0.5	0	0	0	233	225	90	0	45	313	0	0	0	0	0	984					
Program 6	0	0	0	0	0	0	0	0	0	0	188	85	34	0	17	118	0	0	0	0	0	442					
Total	413	142	349	36	107	0	7	0	0	0	949	1957	793	0	391	2724	0	0	24	0	0	7883					

Annual Operating Plan

Acronyms, terms and contractions applied in the cotton industry

CRDC aims to minimise the use of acronyms or technical terms, or to explain their meaning in context. The following is a list of acronyms and technical terms used in the cotton industry that may appear in this publication

AAAA	Aerial Agricultural Association of Australia
AANRO	Australian Agricultural & Natural Resources Outline Database
ABARE	Australian Bureau of Agricultural and Resource Economics
ACEC	Australian Cotton Exhibition Centre - Narrabri
ACGRA	Australian Cotton Growers' Research Association
ACIC	Australian Cotton Industry Council
ACIPA	Australian Centre for Intellectual Property in Agriculture
ACRI	Australian Cotton Research Institute (located near Narrabri, NSW)
ACSA	Australian Cotton Shippers Association
AFFA	Agriculture Fisheries and Forestry – Australia. Now the Australian Government Department of Agriculture, Fisheries and Forestry
ANAO	Australian National Audit Office
APVMA	Australian Pesticides and Veterinary Medicines Authority, formerly the National Registration Authority for Agricultural and Veterinary Chemicals
ARLP	Australian Rural Leadership Program
AWM	Area Wide Management
Bollgard® II	Cotton varieties contain two genes resistant to <i>Helicoverpa</i> spp.
BMP	Best Management Practice
BRS	Bureau of Rural Sciences
Bt	<i>Bacillus thuringiensis</i> (crystal protein gene expressed in INGARD® and Bollgard® II cotton varieties)
CAC Act	Commonwealth Authorities and Companies Act 1997
CCA	Cotton Consultants Australia Inc.
CCC CRC	Cotton Catchments Communities Cooperative Research Centre
CRC	Cooperative Research Centre
Corporation, the	Cotton Research and Development Corporation
CRDC	Cotton Research and Development Corporation
CSD	Cotton Seed Distributors Ltd (a grower-owned cooperative)
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CTFT	CSIRO Textile and Fibre Technology
Department, the	refers to the Australian Government Department of Agriculture, Fisheries and Forestry (DAFF)
DIPNR	Department of Infrastructure, Planning and Natural Resources, New South Wales
DLWC	Department of Land and Water Conservation, New South Wales, now part of the Department of Infrastructure, Planning and Natural Resources
DNR	Department of Natural Resources, Queensland
DOFA	Australian Government Department of Finance and Administration
ESD	Ecologically Sustainable Development
EPA	Environmental Protection Agency, New South Wales
EPBC Act	Environmental Protection and Biodiversity Conservation Act 1999
FOV	<i>Fusarium oxysporum</i> f.s.p. <i>vasinfectum</i>
GMAC	Genetic Manipulation Advisory Committee
GOA	Groundrig Operators Association
GRDC	Grains Research and Development Corporation
Heliothis	Insect pest, more properly known as <i>Heliothis</i> spp. (<i>H. armigera</i> and <i>H. punctigera</i>)

HVI	High Volume Instrument
ICAC	International Cotton Advisory Committee
INGARD®	Cotton varieties containing one Bt gene resistant to <i>Helicoverpa</i> spp.
IP	Intellectual Property
IPM	Integrated Pest Management
LWA	Land and Water Australia
MDBC	Murray-Darling Basin Commission
MLA	Meat and Livestock Australia
MP	Member of Parliament
NFF	National Farmers' Federation
NRA	National Registration Authority for Veterinary and Agricultural Chemicals. Now known as the Australian Pesticides and Veterinary Medicines Authority (APVMA)
NRM	Natural Resource Management
NSW DPI	New South Wales Department of Primary Industries
OGTR	Office of the Gene Technology Regulator
PIERD Act	Primary Industries and Energy Research and Development Act 1989
Pima cotton	<i>Gossypium barbadense</i> . Related to Egyptian cotton, having extra long and fine staples. Limited Australian production in the Darling region.
QDPI&F	Department of Primary Industries & Fisheries, Queensland
RIRDC	Rural Industries Research and Development Corporation
RR ®	Roundup Ready®
RR Flex®	Roundup Ready Flex®
RRDCC	Rural Research and Development Chairs' Committee
TIMS	Transgenic and Insect Management Strategy Committee
TRC	Technology Resource Centre (at the Australian Cotton Research Institute)
'Upland' cotton	<i>Gossypium hirsutum</i> . Comprises the vast majority of the Australian cotton crop



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