Australian Government

Cotton Research and Development Corporation

Annual Operating Plan 2008-2009

The quest for sustainable competitive advantage

Purpose:

This Annual Operating Plan presents the Cotton Research & Development Corporation's planned investments and corporate expenditures in 2008-09.

Enabling legislation:

The Cotton Research & 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).

Responsible Minister

The Hon. Tony Burke, Minister for Agriculture, Fisheries and Forestry

CRDC Board

Chair	Mike Logan
Deputy Chair	Richard (Dick) Browne
Executive Director	Bruce Finney
Non-executive Directors	Glen Fleischfresser
	T.J. Higgins
	Leith Boully
	Lisa Wilson
	David Conners

CRDC Management

General Manager Business and Finance	David Coleman
General Manager R&D Investment	Bruce Pyke
Manager—Communication & Capacity Investment	Rohan Boehm
Manager—Farming Systems Investment	Ian Taylor
Manager—Value Chain Investment	Dallas Gibb
Manager—R&D Implementation	Helen Dugdale
Project Administration Manager	Lee-Anne Melbourne (Acting)
Executive Assistant:	Dianne Purcell
Administrative Assistants:	Margaret Wheeler
	Karen Larsen

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The quest for sustainable competitive advantage

This Annual Operating Plan 2008-2009 (AOP) is the first annual operating plan devised under the Cotton Research and Development Corporation (CRDC) strategic R&D Plan 2008-13.

Through the strategic R&D Plan, CRDC continues to set in place triple bottom line accountability for the Corporation. With this AOP, CRDC details how it shall commence new strategic research initiatives with clearly defined and measurable environmental, economic and social benefits accruing to the cotton industry and the wider community.

This AOP has been developed within the context of the significant current challenges and emerging issues confronting the Australian cotton industry and agriculture in general.

These include:

- The ongoing and serious impact of drought on our industry, agriculture, rural Australia and the nation as a whole;
- The increasing competition for land, water, food, energy and labour;
- Responding to climate change and natural resource management challenges;
- The revised Australian Government's Rural R&D Priorities;
- The commencement of a new five year strategic R&D Plan at July 1, 2008.

CRDC begins the Australian cotton industry's quest for sustainable competitive advantage with this 2008-09 Annual Operating Plan.

CRDC was able to sustain over $12 million per annum of investment in cotton research, development and extension over the period of its last five year strategic R&D Plan through prudent use of its financial reserves. The ongoing drought, however, has resulted in the 2008 cotton harvest being the smallest Australian crop in 30 years and significantly reduced revenue for CRDC. Consequently, CRDC cannot sustain historic levels of R&D investment. During 2008-09 CRDC will invest $9.7 million in research, development and extension. At the same time CRDC will continue to monitor its financial position very carefully as the outlook for 2008-09 cotton season remains uncertain.

Working closely with all its research partners, CRDC has sought to minimise the impact this reduction will have on the research effort generally, and researchers specifically. Our existing research providers have contributed significantly to the formation of the new strategic R&D Plan and are also actively supporting the achievement of the outcomes sought.

The new strategic R&D Plan seeks to forge a sustainable competitive advantage that underpins the future for the Australian cotton industry. With this understandably comes some change in emphasis for research direction and investment. For example, investment in plant breeding research for locally adapted

cotton varieties has been so successful that market failure has been addressed. At the same time new challenges in responding to climate change requires both new cross primary industry collaboration and targeted cotton industry investment.

To address competitiveness, Australian cotton must find a market niche where its superior quality is recognised in the market place. So, CRDC's focus will be to actively seek new services and evolved products to create new and additional value in cotton lint and cotton seed for the benefit of Australian industry and the nation.

In seeking to improve profitability the Australian cotton industry has identified connections between improved productivity, natural resource management and addressing climate change. CRDC's research and development programs will be actively seeking ways to further improve water, fertiliser and energy use efficiency, which at the same time reduce greenhouse gas emissions.

The capacity of the Australian cotton industry to innovate, adopt and adapt its science and to respond to cotton production in a changing climate shall determine the final outcomes of CRDC's strategy. An industry peopled with the necessary knowledge and skills to maximise the impacts and benefits of research and development is a vital investment.

By necessity, this first year of the new strategic R&D Plan will see some transition in investments as CRDC winds down some previously strategic and important areas of research and scopes out the detail for new initiatives in value chain research, future farming systems research and conducts a needs analysis for future human capacity.

The Australian cotton industry has successfully applied research and development to meet evolving challenges for 40 years. This first AOP under CRDC's new strategic R&D Plan 2008-13 marks an important step in the industry's quest for sustainable competitive advantage.

Mike Logan, Chair

Bruce Finney, Executive Director

Mike Logan, Chair, CRDC

This AOP is cast in response to national, rural and industry research priorities, and the new 5-year Strategic Plan for cotton industry R&D.

Bruce Finney, Executive Director, CRDC

About CRDC

OUTCOME

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

OUR VISION

A globally competitive and responsible cotton industry

OUR MISSION

The quest for sustainable competitive advantage

OUR PURPOSE

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

Commitment

CRDC is committed to fulfill its legislated charter to invest in and manage an extensive portfolio of research, development and extension projects. The outcome of this is 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.

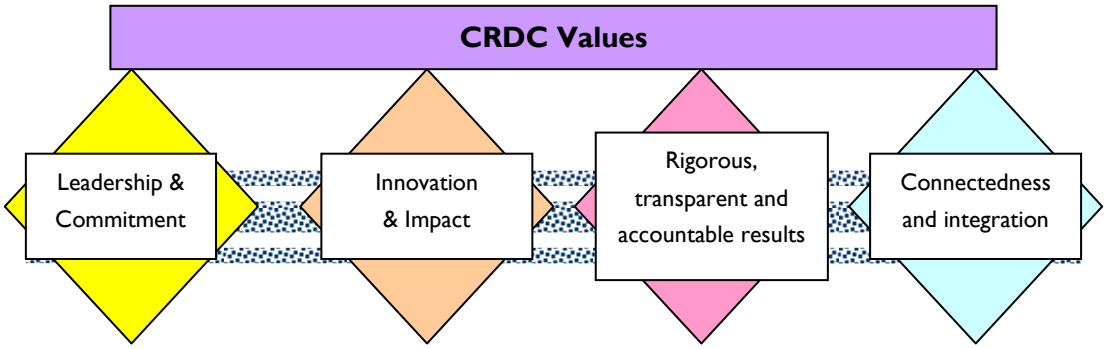
CRDC invests in and coordinates development of technical and non-technical documents, guides and other information tools. The Corporation coordinates workshops, seminars and field days for a range of purposes, including research review and progression, information sharing or technology transfer to industry.

CRDC produces 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

Principles

- Commit to excellence and productivity
- accountability to stakeholders
- act legally, ethically, professionally and responsibly in the performance of duties
- strive to maximise return on investment of industry and public funds invested
- make a difference in improving the knowledge base for sustainable cotton production in Australia
- value strategic, collaborative partnerships
- address National Research Priorities and Rural Research Priorities
- value the contribution, knowledge and expertise of people
- promote active, honest and effective communication
- commit to the future of rural and regional Australia
- comply with and promote best practice in corporate governance
- commit to meeting statutory obligations and requirements comprehensively and in a timely fashion.



THE RURAL RESEARCH AND DEVELOPMENT CORPORATION MODEL

THE LEADING ROLE OF R&D CORPORATIONS

The Rural R&D Corporations (RDCs), including CRDC, all 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 in the short 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 and the Cotton Catchment Communities Cooperative Research Centre.

The Corporation is a key partner and investor in the Cotton CRC which began its operations in October 2005. CRDC will co-invest $4 million per annum during the life of the Cotton CRC.

KEY RESEARCH PROVIDERS

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

Close collaboration between CRDC and research providers is vital to meet industry objectives and research outcomes.

The Nogoa river at the Fairbairn dam in central Queensland in flood during January 2008; raising prospects for return to normal plantings for the 2008-09 cotton crop in that region.

AUSTRALIAN COTTON PRODUCTION

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 between 700 and 880 cotton enterprises currently producing the crop.

Historically, 70 per cent of Australia's cotton has been grown in New South Wales and the majority of the remainder is grown in Queensland. However, prospects for a return to average plantings in NSW will be highly dependent on above average winter rainfall in 2008. At the end of the 2007-08 crop, Queensland and border river production areas had benefited with high summer rainfall events which recharged public and private surface storages.

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.

The average Australian cotton farm is 4630 ha in size of which 362 ha is planted to cotton and 2840 is dryland cropping or grazing. Cotton production is highly mechanized, capital intensive, technologically sophisticated and requires 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 yields 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 we have an industry that 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 cotton 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 existing prior to the recent and current drought.

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 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.

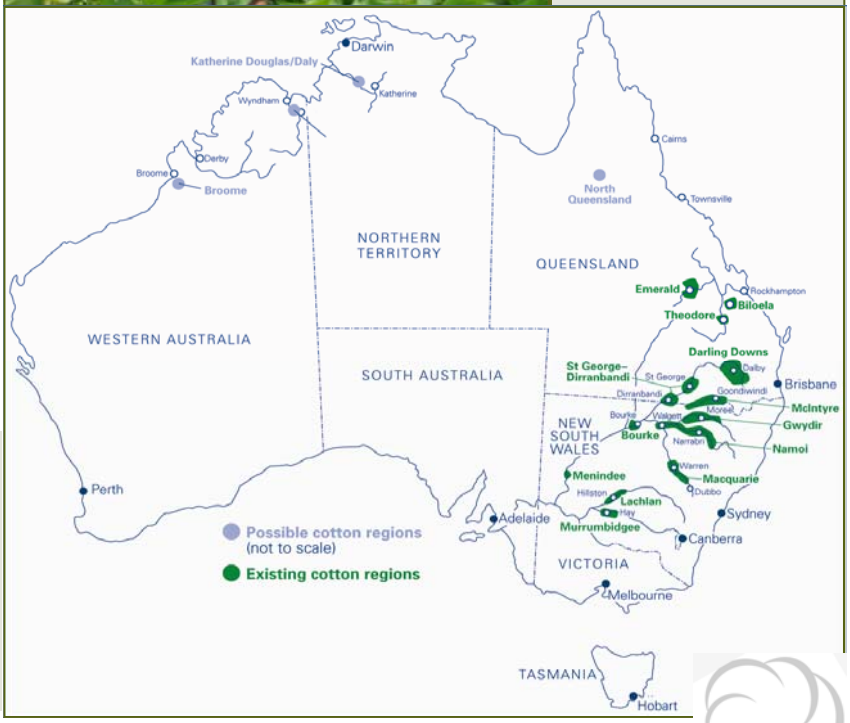
National production averages 2.5m bales produced on 880 entities. This equates to the average cotton farm producing 2840 bales at 7.84 bales/ha from 362 ha of cotton planted.

Cotton producers also engage in other agricultural enterprises which typically include other summer crops such as sorghum, sunflowers and summer legumes such as soy bean. While winter crops include legume and cereal crops such as fababeans and wheat. Livestock are often another key element of a diverse farm where cotton is also grown.

Therefore, cotton is a major crop in an integrated farming system designed to optimise natural rainfall events, soil fertility and irrigation.

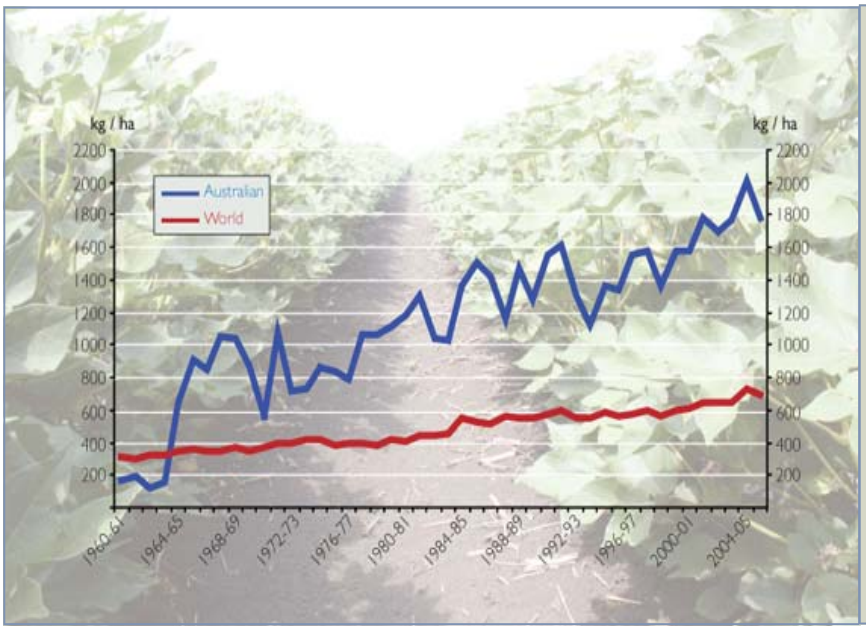
The average yield for irrigated cotton in Australia is 1800 kilograms per hectare; the highest in the world.

The Australian cotton industry makes an important contribution to national, regional and remote rural economies, providing benefits to exports and employment.



R&D and the cotton industry

Australia's cotton farmers are innovative and respected world leaders who have jointly invested in R&D to remain competitive in global markets



A demonstration of Australian cotton yields in comparison with world competitors

Australian cotton producers are recognised for their environmental performance within highly efficient and flexible farming systems.

The Australian cotton industry has developed a high capacity to respond to the challenges posed by climate change as a result of its R&D investments which have enabled it to maintain high rates of annual productivity gain, continuously improving input efficiencies and adoption of its own world recognised environmental management program.

High rates of annual productivity gain with continuous improvement to input efficiencies and the adoption of its own world-recognised environmental management program is gearing up to be a key driver for on-farm technology adoption and improved market opportunities for Australian certified cotton lint.

On the farm, investment in R&D has significantly reduced the quantity of insecticides used to control the major insect pests and this applies to both 'conventional' non-genetically modified cotton, and to genetically modified cotton (Bollgard II).

The Australian cotton industry has made significantly environmental inroads over the last decade. Widespread adoption of Best Management Practices (BMP), Integrated Pest Management (IPM) and the application of biotechnology in the form of genetically modified plants which resist attack by major pests have all contributed significantly to an industry with a demonstrable environmental performance record.

Australian cotton growers are recognised internationally for their environmental performance and ability to produce cotton within highly efficient and flexible farming systems. Beyond the farm gate, a sophisticated network of cotton gins, product classing and logistics centres add value to cotton lint, while extractive industries process cotton seed oil.

This AOP articulates initial R&D investments under the three strategic goals within CRDC strategic R&D Plan 2008-2009.

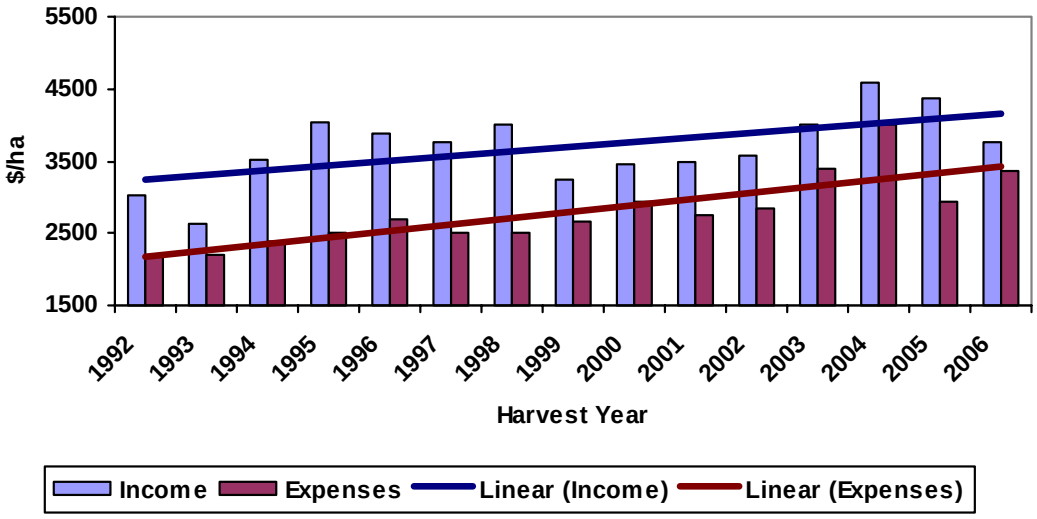
In this, the Australian cotton industry seeks to further develop capacity to respond to the challenges posed by climate variability and change.

A range of research and industry partners have combined with CRDC to co-invest in the most effective production systems, and these investments ensure high yields and production efficiencies keep production internationally competitive.

The 2008-09 AOP addresses intensifying competition for land, water, food, energy and labour. The AOP recognises cotton is no longer necessarily the most profitable crop to grow in all situations and it must compete more directly with other land use options. It is expected that future production levels will be more variable than previously experienced.

The Australian cotton industry face significant challenges to their current and future profitability. The industry's own producer economic data shows the gap between the top 20% and those of average producers continues to widen. This AOP address the cost price squeeze through investment in research that improves the productivity of farming systems while addressing producers' capacity to embrace the benefits of research outputs to reduce costs of production through optimised inputs of energy, biotechnology, labour, fertilisers, irrigation technologies and crop protection products.

The gap in the profitability between the top 20% and average producers is widening.



In 2008-09 cotton is produced in multi-enterprise operations. Competition for inputs from the various enterprises impacts directly on cotton production volumes, and these trends, together with these issues below impact on the nature of farming operations.

- Ongoing and evolving public scrutiny on environmental performance.
- Evolution of catchment management principles and processes
- Globalisation and consolidation in the cotton trading, textile, biotech and germplasm sectors.
- Climate change and variability

Agriculture broadly, and cotton production specifically, faces unprecedented challenges for future human capacity.

The current tight employment market will worsen with declining new job market entrants as a result of the low birth rates during the 1970s and 1980s. Retention of expertise and retraining will be as important as recruitment in dealing with this challenge.

ACHIEVING THE OUTCOMES

R&D INVESTMENT PROCESS

CRDC has a two part process to evaluate and make R&D investment decisions. An online database system (Clarity) is employed to efficiently assess and manage R&D investments.

This system allows CRDC to 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 invited to submit a full proposal by late January.

At an annual budget meeting in March, the CRDC Board shall 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). The 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

CRDC Strategic R&D Plan 2008–13 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.

These plans deliver one integrated outcome via three outputs:

• Economic - Profitability and international competitiveness

• Environmental - Sustainable production systems

• 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 2013.

GOVERNMENT RESEARCH PRIORITIES

In December 2002, the then 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 then Parliamentary Secretary to the Minister for Agriculture, Fisheries and Forestry wrote to the Corporation in March 2003 and May 2007 advising of revised Government priorities for rural research and development.

These were:

- Productivity and adding value
- Supply chain and markets
- Natural resource management
- Climate variability and climate change
- Biosecurity

Supporting Priorities

- Innovation Skills
- Technology

STAKEHOLDER R&D PRIORITIES

Australian Government

Objectives of the PIERD Act. 1989

a/ Increase economic, environmental and social benefits

b/ Achieve sustainable use and management of natural resources

c/ Make more effective use of human resource and skills

National Research Priorities

- An environmentally sustainable Australia
- Promotion and maintenance of good health
- Frontier technologies for Building and Transforming Australian Industries
- Safeguarding Australia

Rural R&D Priorities

- Productivity and adding value
- Supply chain and markets
- Natural resource management
- Climate variability and climate change
- Biosecurity

Supporting Priorities

- Innovation Skills
- Technology

Australian Cotton Industry

Australian Cotton Growers Research Association (ACGRA)

- Invest in the skills, strengths and occupational health and safety of the human resources in the cotton industry and its communities
- Improve the sustainability of the cotton industry and its catchments
- Improve the profitability of the cotton industry
- Create and support a strong, focused and committed research program

CRDC RESEARCH, DEVELOPMENT AND EXTENSION PROGRAM

Achieving the outcomes against the National Research Priorities

The alignment of CRDC R&D investments to research priorities

This overview describes how Rural R&D Priorities and National Research priorities are addressed in this Annual Operating Plan. It also shows how these coincide with National Research Priorities.

<table>
<tr><th>Rural R&D Priorities</th><th>National Research Priorities</th></tr>
<tr><td>Productivity and Adding Value
Improve the productivity and profitability of existing industries and support the development of viable new industries
CRDC has identified research, development and extension activities under its new Plan that will address the following three focus areas under this priority:
1. enable commodities and food to be produced more efficiently and sustainably
2. provide information and tools to help producers identify the best returns on investment, especially in pursuing new product opportunities, and
3. add value through improved products and processes that focus on consumer needs and expectations,</td><td rowspan="2">Promoting and Maintaining Good Health through:
strengthening Australia's social and economic fabric and preventative healthcare (healthy food production).</td></tr>
<tr><td>Supply Chain and Markets
Better understand and respond to domestic and international market and consumer requirements and improve the flow of such information through the whole supply chain, including to consumers.
CRDC has identified research, development and extension activities under its new Plan that will address the following five focus areas under this priority:
1. identify changes in national and international market and consumer requirements (including social and environmental concerns) regarding the integrity and safety of food and other products
2. provide appropriate stages of the supply chain with timely and accurate information on market demands and consumer requirements
3. effectively service the information needs of consumers
4. establish cost-effective traceability, quality assurance and certification systems, improve packaging, storage and transportation, business analysis and supply chain logistics to ensure customers receive high quality products in the shortest possible timeframe
5. support the development of products that enhance consumer health and wellbeing</td></tr>
<tr><td>Natural Resource Management
Support effective management of Australia's natural resources to ensure primary industries are both economically and environmentally sustainable.
CRDC has identified research, development and extension activities under its new Plan that will address the following four focus areas under this priority:
1. effectively manage weeds, pests and diseases, soil health and fish stocks to underpin primary production, environmental sustainability and social needs
2. improve our understanding of water resources and their productive and efficient use for commercial, environmental and social needs
3. support the conservation of native vegetation, biodiversity and ecosystems and the provision of ecosystem services within primary production systems, and
4. mitigate the damage to the natural resource base caused by previous production practices, drought and extreme weather events.</td><td>An environmentally Sustainable Australia</td></tr>
</table>

Rural R&D Priorities	National Research Priorities
Climate Variability and Climate Change *Build resilience to climate variability and adapt to and mitigate the effects of climate change.* CRDC has identified research, development and extension activities under its new Plan that will address the following four focus areas under this priority: 1. increase our understanding of climate variability and climate change to improve our ability to predict changes and to manage impacts on primary industries and regional economies 2. develop and improve climate information tools, including forecasting models, to enable producers to make informed risk management decisions and build resilience to climate impacts 3. help manage and further reduce greenhouse gas emissions from primary industries, and 4. enable industries to respond and better adapt to climate change in a timely and sustainable manner and to capitalise on potential growth opportunities.	**An environmentally Sustainable Australia**
Biosecurity *Protect Australia's community, primary industries and environment from biosecurity threats.* CRDC has identified research, development and extension activities under its new Plan that will address the following two focus areas under this priority: 1. assist in minimising the risk of entry, establishment or spread of identified target invasive pests and diseases that could have major economic, social, health or environmental impacts 2. where practicable and cost-effective, assist to eradicate, contain, control or mitigate the impact of significant established invasive or endemic pests and diseases	**Safeguarding Australia**
Supporting Rural Research and Development Priorities	
Innovation Skills *Improve the skills to undertake research and apply its findings.* CRDC has identified a number of strategies and initiatives under its new Plan to address the following four areas aimed at improving innovation skills: • the constraints on availability and skills for research and innovation • the skills needed by producers to make the best use of research and innovation • the drivers and barriers to adoption of research and innovation by industries and in regional communities, and • the impacts of research and innovation on industries and regional economies, including on the viability of businesses and communities. **Technology** *Promote the development and application of new and existing technologies.* CRDC has identified a number of strategies and initiatives under its new Plan to address the following three areas aimed at encouraging collaborative efforts to develop and apply new and existing technologies: • critical points in the value chain that would benefit from a technological solution are identified • international research and innovation are scanned so Australia can adopt and tailor technologies to our requirements • systems approaches are used in addressing challenges faced by industries	**Frontier Technologies for Building and Transforming Australian Industries**

Total Investment – Composition of Government Research Priorities attributed to each R&D Program

2008-09 R&D Expenditure estimates across Rural Research Priorities

Rural R&D Priorities (RRDP)	Productivity and Adding Value ($m)	Supply Chain and Markets ($m)	Natural Resource Management ($m)	Climate Variability and Climate Change ($m)	Biosecurity ($m)	Supporting the Priorities		Other Research ($m)	Total ($m)
						Innovation Skills ($m)	Technology ($m)		
Program 1	0.404	0.24	0.0	0.0	0.0	0.0	0.40	0.0	1.044
Program 2	0.0	0.0	2.224	0.181	1.967	0.148	0.276	0.0	4.796
Program 3	0.0	0.0	0.143	0.0	0.0	0.789	0.0	0.013	0.944
Total Expendi-	0.404	0.24	2.367	0.181	1.967	0.937	0.676	0.013	6.784

Total Investment – Composition of Government Research Priorities attributed to each R&D Program

2008-09 R&D Expenditure estimates across NRP Goals*

National Research Priorities (NRP)	An Environmentally Sustainable Australia ($m)							Promoting and Maintaining Good Health ($m)				Frontier Technologies for Building and Transforming Australian Industries ($m)					Safeguarding Australia ($m)					Total ($m)
	A1	A2	A3	A4	A5	A6	A7	B1	B2	B3	B4	C1	C2	C3	C4	C5	D1	D2	D3	D4	D5	
Program 1											*0.55*		*0.42*	*0.08*								*1.044*
Program 2	*0.74*	*0.312*	*0.142*		*1.469*		*0.181*				*0.21*	*0.16*	*0.36*		*0.2*	*0.08*			*0.944*			*4.796*
Program 3	*0.1*									*0.025*	*0.12*					*0.682*						*0.931*
Total	*0.842*	*0.312*	*0.142*		*1.469*		*0.181*			*0.025*	*0.89*	*0.159*	*0.774*	*0.075*	*0.198*	*0.759*			*0.944*			*6.771*

Addressing research priorities

THE COMING YEAR

INDUSTRY OUTLOOK

This Plan is forged at a time when the Australian cotton industry continues to face unprecedented drought conditions.

At the end of the 2008 cotton harvest, water storages are still at low levels in most catchments.

Faced with this, the Corporation is forecasting a total crop of 1.5 million bales for the 2008-09 crop.

Above average winter and spring rains are forecast and will be required for 2008 to provide renewed levels of confidence that could result in farmers planting cotton crops. At the same time, many farmers are looking for cash flow injections from winter cereals and hence the outlook for planting cotton in 2008 remains highly uncertain.

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 2007-08 cotton crop size of 0.5 million bales will significantly decrease bale levy receipts for both 2007-08 and 2008-09, while a forecast crop size of 1.5 million bales for 2008-09 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 an historically low revenue forecast of $6.434m.

This level of revenue combined with a 10% reduction in expenditure is expected to result in a $3.255m deficit to be funded from the Corporation's reserves. Reserves will fall 29% from 2007-08 levels. At the time of preparing the AOP the loss of $3.255m is subject to the approval of the Minister of Finance.

Cotton Research and Development Corporation Board

Chair: Mike Logan

Executive Director: Bruce Finney

Total revenue $6.43 million

Total cost of outputs $9.69 million

Outcome

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

Output 1
Environmental
Sustainable Production Systems
Total cost
$2.8 million

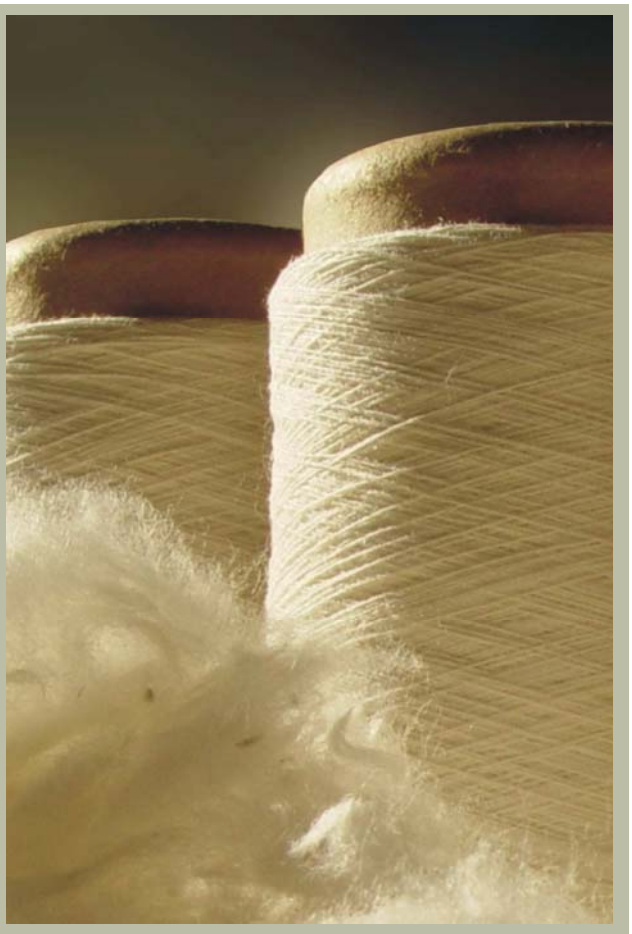
Output 2
Economic
Profitability and International Competitiveness
Total cost
$4.99 million

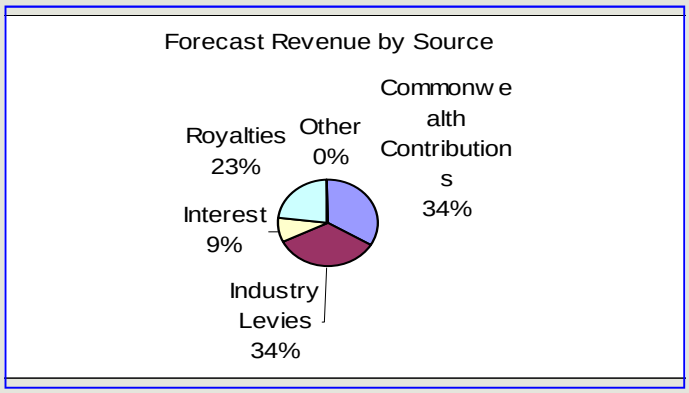
Output 3
Social
Empowered People and Communities
Total cost
$1.9 million

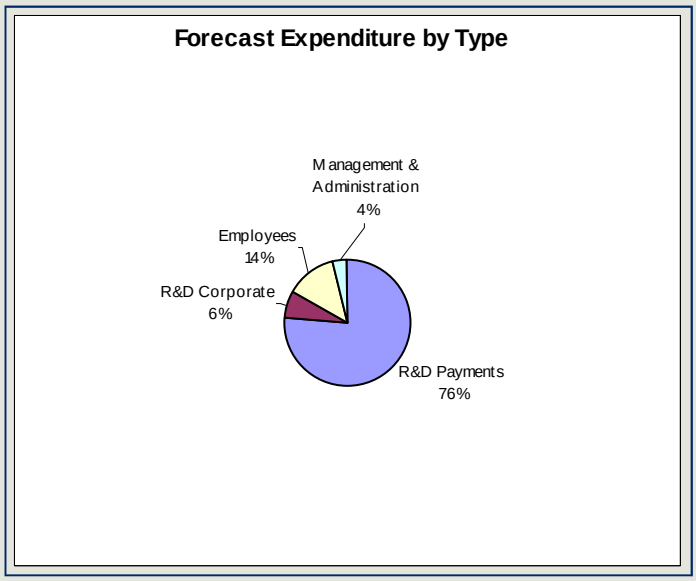
At left, total cost is shown rather than total price. This is because CRDC is primarily resourced through industry levies rather than on the basis of the price of Outputs. CRDC will use its accumulated reserves to fund the difference between total revenue and the total costs of outputs.

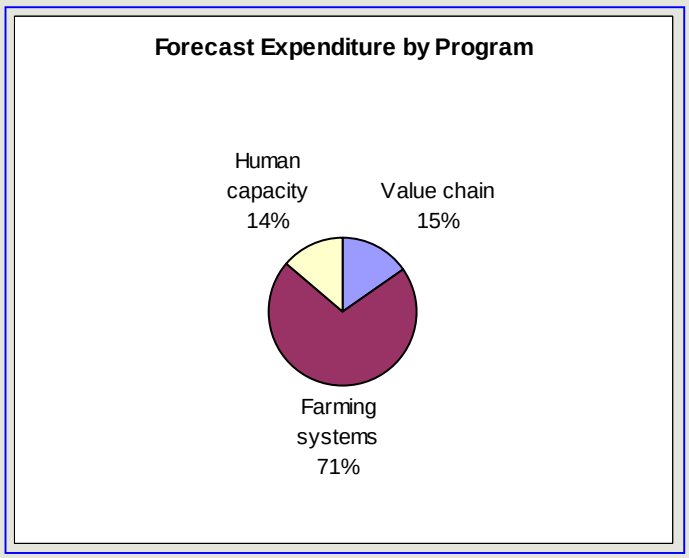
Total resources 2008-2009

	Total resources $'000
Source	
Funds from industry sources	
• Levies	2,194
Funds from Australian Government	
• Matching Government contributions	2,157
Funds from other sources	2,084
Total resources	6,435




Forecast Revenue by Source
Commonwealth Contributions 34%
Other 0%
Royalties 23%
Interest 9%
Industry Levies 34%


Forecast Expenditure by Type
Management & Administration 4%
Employees 14%
R&D Corporate 6%
R&D Payments 76%


Forecast Expenditure by Program
Human capacity 14%
Value chain 15%
Farming systems 71%

PROGRAM 1: VALUE CHAIN

INPUT
$1.04 million
Represents 15 per cent of total R&D expenditure 2008-09

GOAL
Add value to the Australian cotton industry with premium products in improved routes to market.

OUTCOME
High quality consumer-preferred Australian cotton products in the world marketplace

Strategies

1 Develop contemporary knowledge and intelligence about products, markets and supply chains by;

1.1 Researching existing market and supply chains for Australian cotton products

1.2 Communicating market intelligence and knowledge to the Australian industry

1.3 Facilitating new engagement mechanisms with industry and end-users to enable a common understanding of the competitive advantages of Australian cotton products

2 Develop improvements in current products by;

2.1 Indentifying opportunities for improvements in fibre quality and cotton seed properties

2.2 Developing pathways for exploiting the competitive advantage of current premium products

3 Facilitate the development of novel products by;

3.1 Reviewing market intelligence and knowledge to identify needs and opportunities

3.2 Creating and fostering initiatives that uncover innovative and novel products

3.3 Fostering the formation of partnerships to develop novel products

4 Advance cotton product processing by;

4.1 Scanning and evaluating ginning, spinning and textile innovations

4.2 Improving fibre moisture measurement management

4.3 Supporting the development of Best Management Practices with the post-farm gate sector to assure the quality of Australian cotton products

5 Facilitate the development of objective measurement of Australian cotton fibre by;

5.1 Determining appropriate methods and tools that more effectively describe the textile qualities and their values of Australian cotton fibre

5.2 Fostering partnerships with the post-farm-gate sector and end-users to support the evaluation, creation of and uptake of advancements in objective measurement

Outputs and Measures of Success

1. Markets, risks and opportunities for Australian cotton products are clearly defined and understood within the industry.
2. New partnerships between industry, researchers and end-users
3. Post farm-gate best management practices are developed and adopted
4. New and improved products, processes and measurements
5. Assessments of the competitive advantage of the Australian cotton industry

Planned R&D Investments

- Conduct scoping studies of markets, risks and opportunities for Australian cotton products.
- Develop collaborative R&D partnerships with Australian cotton shippers and overseas cotton spinning mills to investigate new opportunities for using Australian premium cotton.
- Investigate the commercial application of new Australian fibre measurement technologies in the value chain.
- Further develop post farm-gate best management practices for ginning and classing and investigate BMPs for the storage and handling of cotton.
- Conduct scoping studies of opportunities for improved and novel Australian cotton products and processes.
- Support initiatives at the ACGRA 14th Australian Cotton Conference extending contemporary market knowledge and value chain research results.

PROGRAM 2: FARMING SYSTEMS

INPUT
$4.79 million
Represents 71 per cent of total R&D expenditure 2008-09

GOAL
Cotton in a highly productive farming system with improved environmental performance

OUTCOME
A more resilient, profitable and competitive cotton farming system.

Strategies

1 Build the industry's understanding of climate and natural resource challenges by;

1.1. Researching jointly, the implications of climate change and natural resource management policy for farming systems

1.2 Investigating the potential impacts of future climates to cotton production and the capacity of the industry to adapt to, and mitigate, its impacts

1.3 Researching the implications of a future carbon economy on cotton production

2 Enhance the capacity of the industry to adopt resilient and adaptive farming systems by;

2.1 Developing conceptual systems thinking to synthesise knowledge

2.2 Benchmarking existing production efficiencies and environmental performances

2.3 Delivering innovative solutions to major farming management constraints and future climate-driven challenges

2.4 Researching optimisation of farming inputs, processes and capacities with environmental benefits

2.5 Supporting a best-practice framework as the primary integrated planning, risk management, benchmarking, knowledge development and extension delivery system

3 Protect industry from bio-security threats by;

3.1 Identifying and communicating major biosecurity threats

3.2 Supporting the industry's preparedness to deal with biosecurity threats

3.3 Researching the management of established, invasive and endemic insect pests, weeds and diseases

3.4 Assuring industry capacity to manage the stewardship of biotechnologies and crop protection products

Outputs and Measures of Success

1. Climate and natural resource management risks and opportunities for Australian cotton producers are defined and understood
2. Climate and natural resource policy implications are interpreted
3. Collaborations and partnerships within and between rural industries delivering innovation, capacity and knowledge for farming systems
4. Benchmarking, assessing and reporting on productivity and environmental performance of cotton farming systems
5. An industry capable of managing its bio-security responsibilities

Planned R&D Investments

- Develop a conceptual map of farming systems involving cotton
- Conduct scoping studies of climate and natural resource management risks and opportunities for Australian cotton producers.
- Investment support for the implementation of the National Climate Change Research Strategy for Primary Industries.
- Benchmarks for existing production efficiencies and environmental performance established.
- Continued investment into benchmarking and reducing greenhouse gas emissions and improved resource efficiency including the testing of BMPs for reducing nitrous oxide emissions.
- Joint investment with other RDCs on improved energy management and standardised approaches to Life Cycle assessments in agriculture.
- Application and evaluation of the Energycalc tool for cotton production.
- Further development of an electronic (online) version of the BMP Manual
- Development of explicit linkages between R&D project outcomes and BMP objectives.
- Continued investment in research into understanding and reducing deep drainage; its implications for soil salinity and water quality.
- Continue to invest in an extensive R&D program for improved water use efficiency research and renewed extension initiatives.
- Continue to monitor the environmental performance of Bt and herbicide tolerant cotton
- Continued monitoring of resistance to conventional chemistry and biotechnology traits.
- Additional research into the development of improved refuge options and management of 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.
- Further investment in support of the prevention, diagnosis and management of Fusarium wilt.
- Continued research on agronomic management strategies for Black Root Rot and other diseases.

PROGRAM 3: HUMAN CAPACITY

INPUT
$0.94 million
Represents 14 per cent of total R&D expenditure 2008-09

GOAL
A culture of innovation and learning.

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

Strategies

1 Identify, understand and plan for future industry capacity needs by;

1.1 Scoping and determining future human resource needs
1.2 Investigating best practice for attracting, developing and retaining people
1.3 Researching jointly the implications of demographic changes for the supply of human resources to agriculture and cotton
1.4 Encouraging and assisting development of rural and cotton industry action plans
1.5 Investigating alternative methods for research and development

2 Improve human resource development and capacity by;

2.1 Supporting initiatives which encourage adaptiveness to change
2.2 Targeting investments in human capacity to meet future needs
2.3 Leveraging industry development
2.4 Establishing and nurturing strategic partnerships
2.5 Funding participatory R&D

3 Enhance capacity to innovate by;

3.1 Developing best practice in communication and adoption
3.2 Developing industry capacity to adopt outputs of research
3.3 Establishing and empowering creative forums and initiatives
3.4 Recognising and rewarding innovation

Outputs and Measures of Success

Our success will be measured by the delivery of the following outputs

1 Industry and R&D capacity needs identified and gaps being addressed
2 An industry with the capacity to deliver our future R&D innovation needs and their adoption
3 The adoption of a shared vision for the cotton industry's future
4 Assessments of industry capacity to innovate, lead and adapt

Planned R&D Investments

- Conduct scoping studies analysing the future industry human resource needs, for the identification of gaps.
- Develop improved linkages with agribusiness to engage them more directly in the industry's extension of research, implementation of BMP and collection of industry data sets.
- Continue to invest in a cotton training coordinator to develop and support a range of training activities.
- Provide funding support for a cotton industry scholarship in the Australian Cotton Leadership Program
- Provide funding support for travel and training opportunities that align with future human capacity needs of the industry.
- Initiate a series of innovation forums.
- Invest in a new farm health and safety joint venture.
- Support for the ACGRA 14th Australian Cotton Conference; extending CRDC funded research results to growers, consultants, agribusiness and industry personnel.

Tables of financial performance and estimates

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

	Estimated actual 2007–08 $'000	Budget estimate 2008–09 $'000	Forward estimate 2009–10 $'000	Forward estimate 2010–11 $'000	Forward estimate 2011–12 $'000
INCOME					
Revenue					
Revenues from government	2,999	2,157	2,638	3,667	4,000
Fees and fines	1,836	2,194	3,937	4,500	4,500
Interest	1,100	579	422	360	330
Rents	15	15	15	15	15
Royalties	628	1,499	1,544	1,235	926
Other	115	(10)	(10)	(20)	(20)
Total revenue	6,693	6,434	8,546	9,757	9,751
Total income	6,693	6,434	8,546	9,757	9,751
EXPENSE					
Employees	1,346	1,320	1,373	1,428	1,485
Suppliers	502	295	304	313	322
Grants	8,828	8,012	7,927	8,158	8,127
Depreciation and amortisation	62	62	61	53	48
Total expenses	10,738	9,689	9,665	9,952	9,982
Surplus (Deficit) before income tax	(4,045)	(3,255)	(1,119)	(195)	(231)
Income tax expense					
Surplus (deficit) attributable to the Australian Government	(4,045)	(3,255)	(1,119)	(195)	(231)

2 Budgeted departmental balance sheet (as at 30 June)

	Estimated actual 2007–08 $'000	Budget estimate 2008–09 $'000	Forward estimate 2009–10 $'000	Forward estimate 2010–11 $'000	Forward estimate 2011–12 $'000
ASSETS					
Financial assets					
Cash and	10,904	7,711	6,549	6,353	6,118
Trade and other receiv-					
ables	862	731	759	933	985
Total financial	11,766	8,442	7,308	7,286	7,103
Non-financial					
Land and build-	489	480	471	462	453
Infrastructure, plant and					
equipment	74	81	105	101	94
Intangibles	102	82	45	35	29
Total non-	665	643	621	598	576
Total assets	12,431	9,085	7,929	7,884	7,679
LIABILITIES					
Provisions					
Employees	203	223	241	251	257
Total provisions	203	223	241	251	257
Payables					
Suppliers	70	70	70	70	70
Grants	748	637	580	722	741
Total payables	818	707	650	792	811
Total liabilities	1,021	930	891	1,043	1,068
Net assets	11,410	8,155	7,038	6,841	6,611
EQUITY[a]					
Parent entity					
Reserves	135	135	135	135	135
Retained sur-	11,275	8,020	6,903	6,706	6,476
accumulated					
Total parent	11,410	8,155	7,038	6,841	6,611
Total equity	11,410	8,155	7,038	6,841	6,611
Current assets	11,766	8,442	7,308	7,286	7,103
Non-current	665	643	621	598	576
Current liabili-	818	707	650	792	811
Non-current	203	223	241	251	257

*Note: 'equity' is the residual interest in assets after deduction of liabilities.

3 Budgeted departmental statement of cash flows (for the period ended 30 June)

	Estimated actual 2007–08 $'000	Budget estimate 2008–09 $'000	Forward estimate 2009–10 $'000	Forward estimate 2010–11 $'000	Forward estimate 2011–12 $'000
OPERATING ACTIVITIES					
Cash received					
Goods and services	35	35	35	35	35
Interest	916	755	492	391	345
Other	7,160	5,756	7,992	9,156	9,319
Total cash received	8,111	6,546	8,519	9,582	9,699
Cash used					
Employees	1,352	1,301	1,352	1,408	1,465
Suppliers	451	319	328	339	348
Grants	8,695	8,079	7,961	7,991	8,081
Total cash used	10,498	9,699	9,641	9,738	9,894
Net cash from or (used by)					
operating activities	(2,387)	(3,153)	(1,122)	(156)	(195)
INVESTING ACTIVITIES					
Cash used					
Purchase of property, plant and equipment	40	40	40	40	40
Total cash used	40	40	40	40	40
Net cash from or (used by)					
investing activities	(40)	(40)	(40)	(40)	(40)
Net increase or (decrease)					
in cash held	(2,427)	(3,193)	(1,162)	(196)	(235)
Cash at the beginning of the reporting period	13,331	10,904	7,711	6,549	6,353
Cash at the end of the reporting period	10,904	7,711	6,549	6,353	6,118

4 Departmental statement of changes in equity — summary of movement (Budget year 2008-09)

	Retained earnings	Asset revaluation reserve	Other reserves	Contributed equity/ capital	Total equity
	$'000	$'000	$'000	$'000	$'000
Opening balance as at 1 July					
Balance carried forward from previous period	11,275	135			11,410
Adjustment for changes in accounting policies					
Adjusted opening balance	11,275	135			11,410
Income and expense					
Income and expenses recog- directly in equity:					
Gain/loss on revaluation property					
Subtotal income and expense					
Surplus (deficit) for the period	(3,255)				(3,255)
Total income and expenses recognised directly in equity	(3,255)	-			(3,255)
Transactions with owners					
Distribution to owners					
Contribution by owners					
Subtotal transactions with					
Transfers between equity components					
Estimated closing balance as at 30 June 2009	8,020	135	-	-	8,155

5 Departmental property, plant, equipment and intangibles - summary of movement (Budget year 2008-09)

	Land	Buildings	Other infrastructure plant & equipment	Computer software	Total
	$'000	$'000	$'000	$'000	$'000
Opening balance as at 1 July 2008					
Gross book value	130	377	110	149	766
Accumulated depreciation		(18)	(36)	(47)	(101)
Opening net book value	**130**	**359**	**74**	**102**	**665**
Additions:					
by purchase			40		40
Depreciation/amortisation expense		(9)	(33)	(20)	(62)
Other movements					-
Disposals:					
other disposals					-
Appropriation (equity injection)					-
As at 30 June 2009					
Gross book value	130	377	150	149	806
Accumulated depreciation	-	(27)	(69)	(67)	(163)
Estimated closing book value	**130**	**350**	**81**	**82**	**643**

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