

# COTTON

RESEARCH AND  
DEVELOPMENT  
CORPORATION



## STRATEGIC PLAN 1998-2003

OUTCOME/OUTPUTS REVISION 2001



## Foreword

In August 1998 the Cotton Research and Development Corporation became subject to the Commonwealth Authorities and Companies Act 1997 (CAC Act). This Act changes the reporting and accountability structures which had been used to complete the Strategic Plan 1998-2003.

The Corporation has faced difficulty with these new planning and reporting requirements as the Strategic (Five Year) Plan 1998-2003 was not compliant with the framework. This revision brings the Corporation's Strategic Plan into line with the legislative requirements.

This document is also a refinement of the previous Strategic Plan. The Plan has been distilled from four strategic goals and 11 objectives to a single Outcome and three main Output groups. The revised plan will allow planning and reporting processes and documents to be simplified.

The aim is to present the Corporation's Stakeholders, Board, Staff and Clients with a clear guide to the CRDC's research program direction and leading principles. This document is also designed to assist the interpretation of secondary planning and reporting documents.



**The Cotton Research and Development Corporation is a partnership between, and jointly funded by, the Federal Government and the Australian Cotton Industry.**

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**PIERD Act (1989)  
Objects**

- a) Increase economic, environmental or social benefits
- b) Achieve sustainable use and management of natural resources
- c) Make more effective use of human resources and skills
- d) Improve accountability for expenditure

**Ministerial  
Priorities**

- a) Sustainable Natural Resource Management
- b) Whole-of-Industry Approach
- c) Biotechnology
- d) Trade and Market Access
- e) Clean and Green
- f) Food Safety
- g) Human Resources

**Output 1  
Sustainability**

Continuous improvement in resource and environmental management

**Effectiveness Measures**

Industry surveys and reports investigating implementation and continued usage of sustainable farming practices

**Output 2  
Profitability and Competitiveness**

Greater reductions in the cost of production than our international competitors, with improved product quality

**Effectiveness Measures**

Comparative analysis of international production systems and costs; Market analysis of pricing, demand and application for Australian cotton vs competitors

**Outcome**

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

**Industry  
Objectives**

- a) Improve the sustainability of the cotton industry
- b) Improve the profitability of the cotton industry
- c) Create and support a strong, focussed and committed research program
- d) Invest in the skills and strengths of the human resources in the cotton industry

**Output 3  
People and Communities**

Viable regional communities enjoying the flow-on benefits of improved sustainability and increased profitability

**Effectiveness Measures**

Social and economic research indicating environmental and financial impacts

## STRATEGIES

## RESEARCH PROGRAMS

1. Improve chemical and non-chemical management of insects

A. Insect Management  
E. BMP & Environment  
H. Plant Breeding & Biotechnology  
I. Farming Systems  
J. Technology Transfer & Extension

2. Improve chemical and non-chemical management of diseases and weeds

B. Diseases & Weeds  
H. Plant Breeding & Biotechnology  
I. Farming Systems  
J. Technology Transfer & Extension

3. Develop and assist the adoption of holistic environmental management systems encompassing relevant catchment management strategies

C. Soils  
D. Water  
E. BMP & Environment  
I. Farming Systems

4. Improve farm management strategies

A. Insect Management  
B. Diseases & Weeds  
C. Soils  
D. Water  
E. BMP & Environment  
I. Farming Systems  
J. Technology Transfer & Extension

5. Improve potential for returns throughout the production chain and assist the development of market opportunities

G. Processing & Market  
H. Plant Breeding & Biotechnology

6. Assess economic, environmental and social impacts on regional communities and the nation; identify and develop appropriate involvement opportunities

E. BMP & Environment  
F. Community & Economics

7. Involve industry personnel in regional adaptation of research and effectively transfer new techniques, strategies and discoveries

G. Processing & Market  
J. Technology Transfer & Extension

8. Develop and engage creative, innovative and highly trained human resources

J. Technology Transfer & Extension  
K. Human Resources

## Strategic Plan Flow Chart

# Cotton R & D Corporation

**VISION:** *A sustainable and environmentally responsible cotton industry*

**MISSION:** *To enhance the contribution that research and development makes to the Australian cotton industry for the benefit of the people of Australia*

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

The Cotton Research and Development Corporation was established in 1990 under the *Primary Industries and Energy Research and Development (PIERD) Act 1989*. This Act outlines the Corporation's accountability to the Federal Government and to the cotton industry through the Australian Cotton Growers' Research Association (ACGRA). These bodies are the Corporation's stakeholders, and as such set objectives for the research program administered by the CRDC.

## Statutory Objectives (PIERD Act 1989)

- Increase economic, environmental and social benefits to the cotton industry and the community
- Achieve sustainable natural resource use and management
- Make effective use of the skills and human resources available in the general community and in the scientific community in particular
- Manage the R&D effort soundly and effectively

The Corporation is accountable to Federal Parliament through the Minister for Agriculture, Fisheries and Forestry the Hon. Warren Truss MP and the Parliamentary Secretary to the Minister, Senator the Hon. Judith Troeth.

## Industry Objectives (ACGRA Strategic Plan)

- Improve the sustainability of the cotton industry
- Improve the profitability of the cotton industry
- Create and support a strong, focussed and committed research program
- Invest in the skills and strengths of the human resources in the cotton industry

Each year the ACGRA meets to review the applications for new research funding and reports from continuing projects. From this meeting the ACGRA makes a number of recommendations to the CRDC Board regarding the current research program and priority areas for the future.

## Priorities

Corporation planning takes into account any additional priorities from Stakeholders. In 1997 the then Minister for Primary Industries and Energy the Hon. John Anderson MP advised the Corporation of the Government's commitment to, and expectations of rural research and development Corporations. These revised priorities included identifying strategic market access and investment opportunities, increasing productivity of land, labour and capital investments and protecting and enhancing the natural resource base.

In December 1999 the Minister for Agriculture, Fisheries and Forestry the Hon. Warren Truss MP wrote to the Corporation to advise of further priority revision, to reflect the opportunities that exist, the challenges which are faced and the changing operational environment. These priorities included:

- Integrating sustainable use of natural resources into farming and land use practices
- Taking a whole-of-industry approach to production, processing and marketing
- Developing biotechnology, but being mindful of consumer concerns
- Being involved in trade and market access support
- Maintaining and enhancing clean and green image
- Addressing consumer food safety concerns
- Cultivating creativity and innovation

## Operating Environment

During the last five years the Australian cotton industry has expanded significantly. Production has more than doubled from a low of 1.4 million bales in season 1993-94 to more than 3.3 million bales in 1999-2000. Cotton production systems have come under greater scrutiny from regulators and the community due to increasing concerns over agricultural practices such as irrigation, resource management, and pesticide management and application. The CRDC and the industry have responded to these concerns through the development of the world-leading Best Management Practices program which is designed to enable growers to identify environmental and operational risks and then develop and implement strategies to manage those risks. The ongoing development of the Best Management Practices program as well as complimentary crop and farm management strategies such as Integrated Pest Management, Area Wide Management (of insect pests), Precision Agriculture and improved Water Use Efficiency systems are central to the Corporation's research program.

About 95 per cent of raw cotton produced in Australia is exported. Australia is the third largest exporter of cotton in the world and the industry is heavily exposed to fluctuations in the world price for cotton. Trade barriers and producer subsidies in competing countries, particularly the United States, continue to distort the world market.

The successful Australian breeding program has developed a range of new cotton conventional and transgenic varieties which are suited to conditions in all the major production areas of Australia and deliver improved yields and fibre quality. Attention is now turning on other factors which impact on fibre quality to ensure Australia maintains and enhances its international reputation as a supplier of quality raw cotton.

# Outcome and Outputs

After careful consideration of the statutory and industry objectives, and identified research priorities, the Corporation has developed a single Outcome:

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

Progress towards this Outcome will be made through the research and development program, and measured by a range of Outputs which fall into three broad categories. These Outputs will help contribute to the achievement of our Outcome through the natural flow-on of economic and environmental benefits to the regional communities where the cotton industry is based, and then to the wider community. Improvements in natural resource management will assist in ensuring the long-term future of the industry and its ability to have positive economic and environmental impacts. The Corporation has also developed a number of measures to analyse the effectiveness of the research and development plan in the delivery of these Outputs.

The Outputs will be achieved through the implementation of eight strategies. The strategies provide a focus for the research program which has been organised into 11 areas. The Corporation invests in and manages a comprehensive and integrated research program, which means that a single area of research may be a part of multiple strategies and contribute to a number of the Outputs.

## OUTPUT 1. SUSTAINABILITY

**Research and development providing knowledge and products that promote continuous improvement in resource and environmental management.**

### Measuring Effectiveness:

Through the analysis of industry surveys and reports that investigate the implementation and continued usage of sustainable farming practices the Corporation will be able to judge the effectiveness of its efforts in Sustainability. These surveys and reports may include an industry environmental audit, chemical usage surveys and water-use-efficiency measures.

### Addressing Priorities:

Achievements under this Output will address a number of Ministerial priorities including the integration of sustainable natural resource management in farming and land use practices, maintaining and enhancing a clean and green image for the Australian cotton, and the development of biotechnology while being mindful of consumer concerns.

## **Strategy 1**

### **Improve chemical and non-chemical management of pests and beneficial insects**

#### **Key Performance Indicators**

- 1.1: Changes to pesticide usage that are compatible with the principles of Integrated Pest Management
- 1.2: Adoption of more pre-emptive strategies for managing resistance to new pesticides
- 1.3: Co-ordinated Area Wide Management groups operating effectively in the industry

#### **Major Contributing Research Programs**

- A: Insect Management
- E: Best Management Practices and the Environment
- H: Plant Breeding and Biotechnology
- I: Farming Systems
- J: Technology Transfer and Extension

## **Strategy 2**

### **Improve chemical and non-chemical management of diseases and weeds**

#### **Key Performance Indicators**

- 2.1: Changes to herbicide use that are compatible with the principles of Integrated Weeds Management
- 2.2: Introduction of improved varietal tolerance and agronomic practices for disease management

#### **Major Contributing Research Programs**

- B: Diseases and Weeds
- H: Plant Breeding and Biotechnology
- I: Farming Systems
- J: Technology Transfer and Extension

## **Strategy 3**

### **Develop and assist the adoption of holistic environmental management systems encompassing relevant catchment management strategies**

#### **Key Performance Indicators**

- 3.1: The introduction of new BMP modules addressing key environmental priorities
- 3.2: An annual increase in the number of cotton farms audited to BMP

#### **Major Contributing Research Programs**

- C: Soils
- D: Water
- E: Best Management Practices and the Environment
- J: Technology Transfer and Extension

## OUTPUT 2. PROFITABILITY & INTERNATIONAL COMPETITIVENESS

**Research and development providing knowledge and products to enable greater reductions in the cost of production than our international competitors, with improved product quality.**

### Measuring Effectiveness:

By using comparative analyses of international production and costs, and market analysis of pricing, demand and application for Australian cotton, the Corporation aims to build baseline data and long-term trend information regarding the profitability of Australian growers versus their international competitors. These studies are likely to focus on key aspects including cost-effectiveness of insect, disease and weed control, and any changes in the quality of Australian cotton.

### Addressing Priorities:

The Profitability Output will directly and indirectly address a range of Government priorities including providing support for trade and market access negotiations, taking a whole-of-industry approach to production, processing and marketing and developing biotechnology.

### Strategy 4

**Improve farm management strategies**

#### Key Performance Indicators

- 4.1: Adoption of improved farm management decision-support tools and strategies
- 4.2: Increased profitability from adopting improved farm management strategies

#### Major Contributing Research Programs

- A: Insect Management
- B: Diseases and Weeds
- C: Soils
- D: Water
- E: Best Management Practices and the Environment
- I: Farming Systems
- J: Technology Transfer and Extension

### Strategy 5

**Improve potential returns throughout the production chain and assist the development of market opportunities**

#### Key Performance Indicators

- 5.1: Improved product quality downstream
- 5.2: Uptake of Curran Report recommendations

#### Major Contributing Research Programs

- G: Processing and Market
- H: Plant Breeding and Biotechnology

## **OUTPUT 3. PEOPLE & COMMUNITY**

**Research and development providing knowledge and products that promote viable regional communities enjoying flow-on benefits of improved sustainability and profitability.**

### **Measuring Effectiveness:**

The Corporation aims to quantify some of the flow-on benefits of improved industry sustainability and profitability in order to measure the effectiveness of its efforts for this Output. This will include social and economic research examining the environmental and financial impacts of cotton production. Analysis in this area may also include surveys of cotton-based communities and a sociological examination of an environmental audit.

### **Addressing Priorities:**

This Output addresses a number of Ministerial priorities with the key one being encouraging creativity and innovation.

### **Strategy 6**

**Assess economic, environmental and social impacts on regional communities and the nation; identify and develop appropriate involvement opportunities**

#### **Key Performance Indicators**

- 6.1: Longitudinal regional surveys showing attitudes to cotton growers/growing
- 6.2: Increased number of community projects, addressing identified strategies

#### **Major Contributing Research Programs**

- E: Best Management Practices and the Environment
- F: Community and Economics

### **Strategy 7**

**Involve industry personnel in regional adaptation of research, and effectively transfer new techniques, strategies and discoveries**

#### **Key Performance Indicators**

- 7.1: Number and strategic locations of extension personnel funded
- 7.2: Increased number of programs with adoption assessed by the National Cotton Extension Team

#### **Major Contributing Research Programs**

- G: Processing and Market
- J: Technology Transfer and Extension

### **Strategy 8**

**Develop and engage creative, innovative and highly trained human resources**

#### **Key Performance Indicators**

- 8.1: Identification of and action taken to close perceived gaps in scientific and community skills base

#### **Contributing Research Programs**

- J: Technology Transfer and Extension
- K: Human Resources

## Planning Framework

In August 1998 the Corporation became subject to the *Commonwealth Authorities and Companies (CAC) Act 1997* which required new levels of accountability within reporting processes. During the transition period the Corporation faced some difficulty as the Strategic (Five Year) Plan 1998-2003 was not fully compliant with the required Outcomes/Outputs framework. The Board conducted a review of the Corporation's Strategic Plan to bring it into line with legislative requirements. As a result, the Corporation's planning structure was distilled from four objectives and 11 funding programs into a single Outcome and three Output groups. By drawing on the main elements of the Outcome, the Corporation has been able to re-focus its research program under the headings of 'Sustainability', 'Profitability and Competitiveness', and 'People and Communities'. The revised and simplified plan will allow the CRDC to more clearly demonstrate the links between our statutory and industry objectives and the Outputs and Outcome.

Under the *PIERD Act 1989* the Corporation has the responsibility not only formulate an R&D Plan but also to consult and take into consideration the views of its stakeholders, and other groups as deemed appropriate. The CRDC Board does this by maintaining close contact with cotton industry and research organisations, and through continual communication with Government. In addition, the Corporation's industry stakeholder, the Australian Cotton Growers' Research Association, annually reviews project applications and progress reports, and provides subsequent recommendations to the Board.



# Contribution of Research to Outputs

The Corporation recognises that the research programs do not contribute equally to all Outputs. The linkages between strategies and research programs does provide an indication of the relative contributions of research programs to Outputs, these linkages also reflect 'flow-on' benefits to Outputs. In order to calculate the relative contribution of funding from each research program to the Outputs the Corporation uses the allocation table below. For example, if the total budget for Insect Management is \$100,000, the Corporation estimates that \$60,000 would be directly contributing to the Sustainability Output, while \$40,000 was directed towards improving Profitability.

<b>Program A:</b>	<b>Insect Management</b>		
	Sustainability 60%	Profitability 40%	
<b>Program B:</b>	<b>Diseases and Weeds</b>		
	Sustainability 40%	Profitability 60%	
<b>Program C:</b>	<b>Soils</b>		
	Sustainability 80%		Profitability 20%
<b>Program D:</b>	<b>Water</b>		
	Sustainability 90%		10%
<b>Program E:</b>	<b>Best Management Practice &amp; the Environment</b>		
	Sustainability 60%	10%	People 30%
<b>Program F:</b>	<b>Community</b>		
	People and Communities 100%		
<b>Program G:</b>	<b>Processing &amp; Market</b>		
	Profitability 80%		People 20%
<b>Program H:</b>	<b>Plant Breeding and Biotechnology</b>		
	Sustainability 60%	Profitability 40%	
<b>Program I:</b>	<b>Farming Systems &amp; Agronomy</b>		
	Sustainability 50%	Profitability 50%	
<b>Program J:</b>	<b>Technology Transfer &amp; Extension<sup>1</sup></b>		
	People and Communities 100%		
<b>Program K:</b>	<b>Human Resources</b>		
	People and Communities 100%		

1. In the Strategic Plan research program J is shown as contributing to all three Outputs. The Corporation believes the Technology Transfer and Extension program will play a key role in the achievement of the Sustainability and Profitability Outputs. However, its direct financial contribution falls under the People and Communities Output.

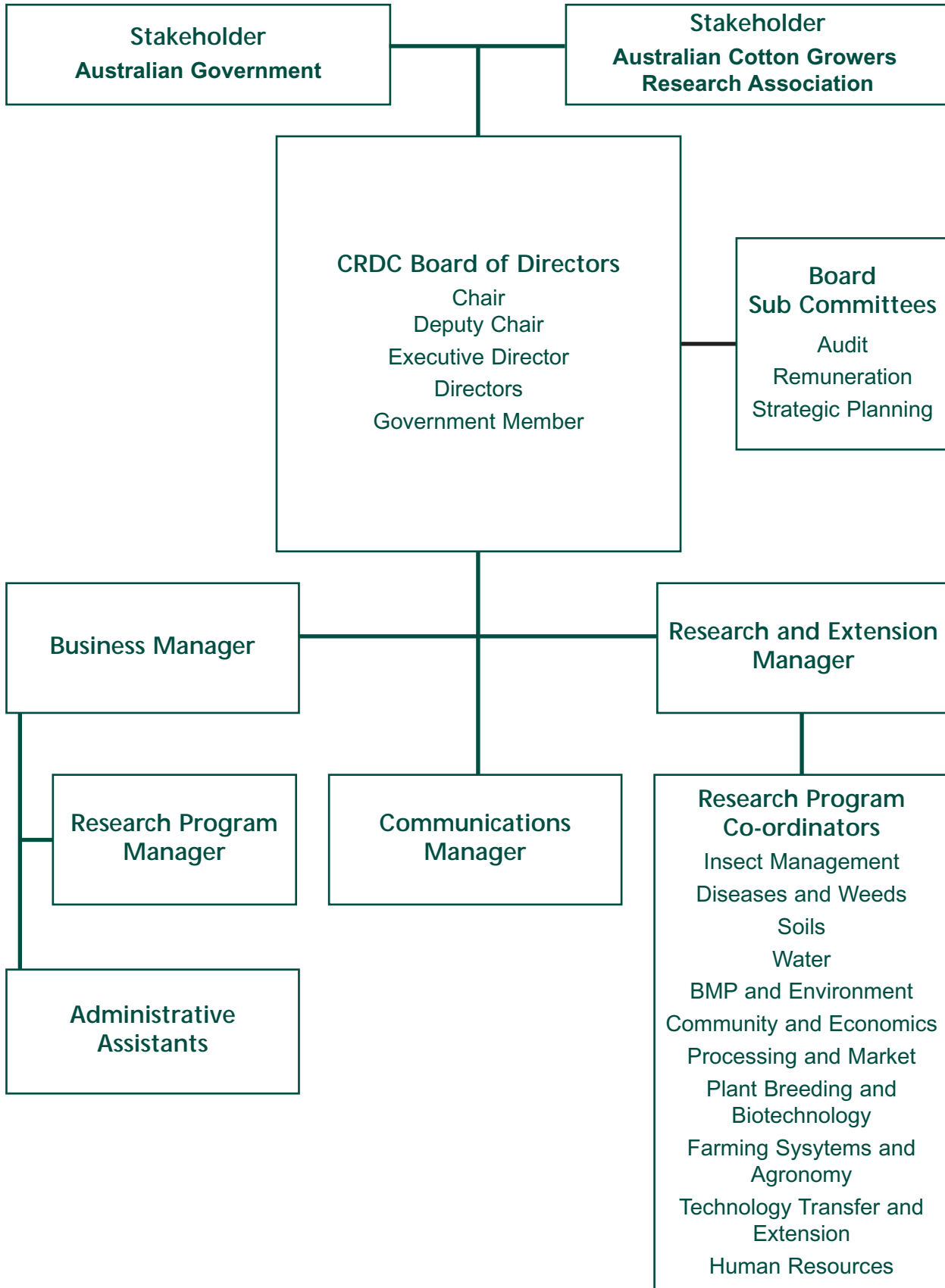
# Statement of Principles

The Cotton Research and Development Corporation is charged with ensuring the long-term viability of the cotton industry in Australia through strategically-funded research, development and extension projects and activities. It is also a function of the Corporation to be fully accountable to its stakeholders. The following principles have been formulated to guide the people of our organisation on how we will pursue our objectives. These principles embody a set of values which underlie our decisions, actions and relationships.

The Board, Management and Staff of the Cotton Research and Development Corporation:

1. Are committed to excellence and productivity;
2. Are committed to providing the highest levels of accountability to stakeholders;
3. Will act legally, ethically, professionally and responsibly in the performance of their duties;
4. Strive to maximise return on investment of industry and public funds invested through our Corporation;
5. Strive to make a difference in improving the knowledge base for improving cotton production in Australia;
6. Value strategic, collaborative partnerships with research providers, other research and development bodies, industry organisations, stakeholders and clients for mutual industry and public benefits; including co-operation with kindred organisations to address matters of national priority;
7. Value the contribution, knowledge and expertise of the people within our organisation and that of our contracted consultants, external program co-ordinators and research providers;
8. Promote active, honest and effective communication;
9. Are committed to the future of rural and regional Australia;
10. Comply with and promote best practice in corporate governance; and,
11. Are committed to meet all statutory obligations and accountability requirements in a comprehensive and timely manner.

# Corporate Structure



*“ A more sustainable,  
profitable and competitive  
cotton industry providing  
increased environmental,  
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