INTERNATIONAL COTTON ADVISORY COMMITTEE

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AUSTRALIA COUNTRY REPORT
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Table of Contents

Introduction p3
Outlook for Supply and Demand p3
Outlook for Cotton Prices and Input Costs p5
Cotton Industry Growth p5
   Access to Resources, Climate Change and Environmental Performance p5
Industry Harmonisation and Standardisation p6
Research p8
Adoption of new Cotton Technology in Australia p8
Industry Support and Market Access p9
Conclusion p9
INTRODUCTION

In Australia, approximately two-thirds of Australia’s cotton is grown in New South Wales with the remainder produced in Queensland.

The Australian cotton industry employs about 10 000 people and is the main economic activity of many regional communities. At its peak, annual production has been more than 800 000 tonnes and contributed almost AUD$2 billion in export earnings to the Australian economy. The majority of production comes from family-owned farms.

Cotton is Australia’s sixth largest agricultural export (in value terms), with around 98 per cent of production destined for Asia, primarily to China, Indonesia and Thailand. Australia has the capacity to produce about three per cent of the world’s cotton.

The cotton industry is highly water dependent and, in recent years, production has been significantly reduced by drought. However, increased water availability is expected to lead to a significant increase in plantings in 2010-11 and increased optimism for the longer-term.

While the outlook is good at present, significant challenges exist if the Australian and global cotton industry are to fully realise opportunities that exist. Resource constraints, climate change, community expectations for sustainable industry practices and market risk management are important issues. In responding to these challenges, the Australian cotton industry, with the support of R&D, is promoting adoption of a variety of initiatives designed to make the industry more efficient, profitable and sustainable. These include some developed in Australia and others that are accepted international practice.

In addition, the Australian industry and government recognise the importance of a global approach to meeting the competition from alternative fibres and maintaining the important contribution that cotton production makes to rural communities. As such, they continue to support measures aimed at reducing support and liberalising trade in cotton and other agricultural commodities, demand enhancement and harmonisation and standardisation of industry practices.

OUTLOOK FOR SUPPLY AND DEMAND

As shown in Figure 1, cotton production has fluctuated from year to year. Over 10 years, it has ranged from as low as 133 000 tonnes in 2007-08, to as high as 819,000 tonnes in 2000-01.

2009-10 Harvest
The most recent estimate\(^1\) for Australian cotton production in 2009-10 is 387 000 tonnes (1 704 845 bales), an increase of 18 per cent over drought affected 2008-09 production of 329 000 tonnes (1 449 339 bales).

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\(^1\) (September 2010 by Australian Bureau of Agricultural and Resource Economics-Bureau of Rural Sciences (ABARE-BRS))
The estimated area planted for 2009-10 was 208 000 hectares, with lint yield estimated to be 1.86 tonnes per hectare. Cotton crops in many regions of Australia in 2009-10 benefited from very heavy rainfall in late 2009.

**2010-11 Crop Forecast**
Heavy winter rainfall in many cotton growing regions across Australia has significantly boosted irrigation dam levels and the improved water situation is expected to lead to increased cotton plantings and higher production in 2010-11.

In its latest official forecast this month, ABARE-BRS predicted that Australian cotton production would increase by nearly 70 per cent in 2010-11, to 653 000 tonnes (2 876 651 bales). This is based on the 2010-11 forecast of a 96 per cent rise in cotton plantings to approximately 408 000 hectares, which includes near record plantings of dryland cotton. The forecast increase reflects a combination of high cotton prices, a marked recovery in irrigation water supplies, favourable soil moisture levels for dryland cotton crops, and the availability of improved cotton varieties.

**Exports**
The Australian cotton industry is export oriented, with up to 98 per cent of annual production sold on the world market. Australian cotton exports in 2010-11 are forecast to be 461 000 tonnes, up 17 per cent on the 2009-10 figure of 395 000 tonnes (with a value of AUD$1007 million). This would still be well below the record level of Australian cotton exports of 834 000 tonnes in 2000-01.

**OUTLOOK FOR COTTON PRICES AND INPUT COSTS**

**Prices**
Returns at the gin gate to Australian cotton growers are forecast to be AUD$2.34 per kilogram (including the value of cottonseed and net of ginning costs) in 2010-11, up from an estimated AUD$2.27 per kilogram in 2009-10. The ability of Australian cotton growers to benefit from increases in world cotton prices since mid-2009 has been dampened by an appreciation in the Australian dollar. Nevertheless, the
forecast return to Australian cotton growers in 2010-11 will, if it eventuates, be the highest in constant dollar terms since 2003-04.

**Input costs**
The ABARE-BRS index of prices paid by farmers in Australia for inputs is forecast to increase by 4.6 per cent to 148.1 in 2010-11, up from 141.5 in 2008-09. However, input prices paid by Australian farmers have declined substantially from 2007-08 when the index reached 155.1.

**Cotton Price Risk Management**
The Australian Cotton Shippers Association (ACSA), through its merchant members is responsible for the orderly marketing of the Australian cotton crop. The “forward market” (ability to price production up to 3 years forward) that operates in Australia is one of the most advanced (free market) commodity markets of its kind in the world. Operation of this “forward market” is dependent on access to a proper functioning futures market, foreign exchange markets, and adequate working capital to facilitate hedging and finance movement of the cotton crop from producers to spinning mills. In the absence of government subsidies or price support, operation of the forward market is very important in providing price discovery, risk management and an incentive to continue producing cotton in the future.

**COTTON INDUSTRY GROWTH**

**Access to resources, climate change and environmental performance**
Resource constraints, climate change and community expectations for sustainable industry practices are some of the important issues that must be addressed if the cotton industry is to fully realise opportunities for growth.

1. **Resource Constraints**
   Industry has increasing concerns about food and fibre security in Australia because of factors such as water scarcity, competition for agricultural land by the mining sector and competition for labour. Climate change, the extended drought and historical over-allocation of water entitlements in the Murray-Darling Basin in South-East Australia are having an effect on cotton production, future production capabilities and associated rural communities.

2. **Climate Change Preparedness**
   The Australian cotton industry recognises the significant threat posed by climate change and its research effort is providing growers with the knowledge and tools to adapt to a warmer and drier climate at the same time as reducing its greenhouse gas emissions. This is being achieved through improvements in energy, water and nitrogen input efficiency in concert with the adoption of new technologies and better practices.

3. **Environmental Performance**
   A number of industry and Australian Government supported initiatives have been undertaken to analyse and report, in a holistic way, on the performance of cotton production (financially, socially and environmentally). This is building positively
on the future focus, value and commitment the industry already places on sustainability.

The Best Management Practices (BMP) program aims to achieve world’s best practice in cotton production. It gives the community confidence that the industry is managing its natural and workplace environment in a responsible manner. The program is supported by industry R&D that provides the latest science and information, self assessment mechanisms, practical tools and auditing processes, to ensure that cotton production achieves the highest standards in:

- Biosecurity;
- Biotechnology;
- Energy and Input Efficiency;
- Fibre Quality;
- Human Resources;
- Integrated Pest Management;
- Natural Assets;
- Pesticide Management;
- Petrochemical Storage & Handling;
- Soil Health;
- Water Management;
- Classing; and
- Ginning.

Reductions in pesticide use and improvements in water use efficiency are two examples of where Australia is delivering significant environmental benefits.

Investment in R&D has significantly reduced the quantity of insecticides used to control major insect pests for both ‘conventional’ non-genetically modified cotton and genetically modified cotton (Bollgard II), as reflected in Figure 2 below.

**Figure 2: Reduction in pesticide use on Australian cotton crops over 12 years**
The water productivity of the Australian cotton industry continues to improve significantly, as Figure 3 below illustrates, with producers now achieving nearly two bales of cotton per megalitre of water — almost double the industry average of just a decade ago.

**Figure 3: Cotton production per megalitre of water**

| Estimated Irrigation Water Use Index (IWUI) for Australian Cotton 2001 to 2008 |
|---------------------------------|---------------------------------|
|                                 | *based on ABS water data and Industry Production data* |

Industry Harmonisation and Standardisation

The Australian cotton industry is targeting five key areas for harmonisation and standardisation that will support further industry growth.

1. **Best Management Practices in Cotton Production**
   The Best Management Practices (BMP) program is the Australian cotton industry’s guide for growing cotton in harmony with the environment and is a guarantee of environmental and ethical stewardship. The program now extends throughout the supply chain ensuring quality, traceability and authenticity of product.

   More information is available at [www.bmpcotton.com.au](http://www.bmpcotton.com.au)

2. **Best Practice in Cotton Ginning**
   The Australian Cotton Ginders’ Association is implementing a program of continuous improvement with audits against a set of agreed best-management practices.

3. **Best Practice in Instrument Based Classing Systems**
   The Cotton Classer’s Association of Australia has established procedural standards for Australian classing facilities. Some practical examples of the standards include sample conditioning, wall and ceiling colour, lighting, humidity management, sample testing procedures and check testing. Annual audits are
performed to ensure classing facilities are adhering to the BMP program and delivering a high level of consistency between classing facilities in Australia.

The Australian cotton industry actively supports the move towards trading on instrument-based classing systems. All properties other than colour and leaf are instrument-based results. Classing rooms in Australia participate in the Commercial Standardisation of Instrument Testing of Cotton (CSITC) round trials.

4. **Improving Industry Efficiency in Storage, Transportation and Handling**

The Australian cotton industry is currently establishing best management practice guidelines for the storage and handling of cotton bales from the gin through warehousing and despatch by sea freight. The guidelines address outside storage, bale integrity, bale shape & size, loading & stacking as well as standardisation of packaging.

5. **Harmonisation of Cotton Trading Rules**

With the volatile nature of cotton prices, it is important to have standard international trade and arbitration rules by which cotton can be traded. The Australian cotton industry predominately trades under the International Cotton Association rules and arbitration, both domestically and internationally.

The sanctity of contract, regardless of market movements, is of paramount importance to the Australian industry, especially as several crop years are traded forward with growers and mills. The Australian cotton industry is active in, and fully supports all efforts being undertaken internationally to improve sanctity of contract, arbitration procedures in the event of disputes, fulfilment of arbitration awards and standardisation of trading rules, bale sizes and packaging.

The Australian cotton industry supports the evolution of national and commercial branding programs, including its own BMP Cotton Program, and calls for truth in labelling and product integrity. The Australian cotton industry believes in the establishment of world standards, protocols and processes for the traceability of cotton throughout the supply chain, from field to fabric, including the protection of intellectual property, brands and trademarks.

**Research**

Increased agricultural R&D investment is seen as a key international response to the challenge of global food and fibre security. The importance of R&D to the future growth of the global industry was highlighted by Alston, Beddow and Pardey (2009) who argued that there are strong linkages between levels of investment in R&D and productivity growth in agriculture, and that declining public investment in agricultural R&D is correlated with declining rates of productivity growth — and consequently in food and fibre security, economic development and environmental protection.

The Australian cotton industry continues to respond to rising costs for farm inputs such as fuel, electricity, agrochemicals and fertiliser through a focus on research into

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2 2009 article in “Science Magazine”
productivity improvement. This research recognises the linkages between productivity and environmental performance in driving farming system improvements. Key research and development (R&D) priorities are continued improvements to cotton nutrition diagnosis and nitrogen fertiliser efficiency and the economical use of water and energy within flexible farming systems. Australian cotton farmers are equally interested in reducing overhead and capital costs. Hence farmers address input costs as an important aspect of improving business performance.

The benefits of research and development to the Australian industry are reflected in the productivity gains shown in Figure 4 below.

**Figure 4: Comparative productivity growth in cotton production, Australia vs world**

There is a strong industry and government commitment to cotton R&D in Australia with an investment of $9.8 million in 2009-10 through the Cotton Research and Development Corporation (CRDC), an Australian Government agency. It facilitates research using levy funds from growers and matching contributions from the government.

While the model under which the CRDC, and similar agricultural research agencies, operate has delivered significant benefits for industry, the Productivity Commission (another agency of the Australian Government) is undertaking a review of its effectiveness and efficiency. The government will use the outcomes of the review to inform future decisions about how to improve the way the Australian R&D system for agriculture works.

Australian cotton farmers have a reputation for being rapid adopters of the results of R&D, including new technologies. In supporting this outcome, the Australian cotton industry has commenced implementation of a new more commercial and customer driven approach for supporting R&D adoption. Growers and industry will be linked to the outputs of R&D through a web-based version of the best management practices program and other complementary delivery pathways that better engage with commercial consultants and agribusiness.
Adoption of New Cotton Technologies in Australia

The Australian cotton industry has progressively adopted genetically modified (GM) cotton over the past 14 years with 96 per cent of the cotton varieties planted in 2009-10 genetically modified. The Australian cotton industry anticipates the release of varieties with the next generation Bt traits in 4-5 years time. Sustaining the efficacy of Bt and herbicide tolerance traits remains a key focus for industry as resistance remains an ever-present threat. Hence, the industry has made considerable investment in monitoring any development of potential resistance to ensure the long-term viability of the biotechnological traits in cotton.

Adoption of the John Deere Round Module cotton picker technology is occurring rapidly with expectation that more than one third of the 2010-11 crop will be harvested by 60 of these machines. For Australian farmers the advantages are fewer requirements for labour, improvement in workplace safety and gains in operational efficiency. Substantial changes are necessarily underway in ensuring transport; handling, ginning, classing and logistical arrangements complement the on-farm innovation.

Industry Support and Market Access

Industry recognises the value in collective consideration of other avenues to ensure the global industry sustains its competitive advantage against alternative fibres. As such, it continues to support measures aimed at reducing government support and liberalising trade in cotton and other agricultural commodities

1. Support
Australia has the lowest level of agricultural support of cotton producing countries with Australian farmers amongst the least subsidised. There is neither government price support nor any other form of production subsidy in Australia specific to cotton growing, ginning or marketing, other than contributions to research and development. There is active competition amongst ginners for seed cotton and amongst merchants for raw cotton, providing growers with a choice of ginning and/or selling arrangements.

Australia’s recent (2007-09) Producer Support Estimates (PSE) average\(^3\) of 4 per cent reflects the low level of production and trade distorting support provided to Australian farmers. Australia’s PSE compares favourably with the 21 per cent average PSE for OECD countries in 2008, 48 per cent for Japan, 46 per cent for Korea, 22 per cent for the EU and 8 per cent for the US. Only New Zealand has a PSE lower than Australia – at 1%.

2. Overcoming Trade Impediments
A successful conclusion to the World Trade Organization (WTO) Doha Round of trade negotiations remains the Australian Government’s highest trade policy priority.

Global agricultural trade reform to reduce, and eventually stop, the use of trade distorting subsidies in the cotton sector is particularly important for cotton

\(^3\) 2010 OECD Monitoring and Evaluation Report
producing and exporting nations such as Australia. In some countries, subsidies maintain cotton production at artificial levels and reduce export opportunities and producer returns in both developed and developing competitor countries.

The WTO Doha Round of trade negotiations offers the prospect of achieving improvements to the rules governing trade as well as binding reductions in tariffs and targeted cuts to cotton subsidies. Cotton is singled out for more comprehensive reform than other commodities, with a Ministerial mandate to address cotton ‘ambitiously, expeditiously and specifically’ in relation to all trade-distorting policies affecting the sector. The current financial turmoil should be seen as a driver for further reform.

Australia continues to encourage the International Cotton Advisory Committee to lobby Member Governments in seeking an ambitious outcome to the Doha Round.

**Conclusion**

The Australian cotton industry has responded to challenges such as resource constraints, climate change, community expectations for sustainable industry practices and market risk management by implementing a variety of best practice initiatives. This, combined with world leading R&D and its geographic location, has led to it enjoying a number of competitive advantages, including:

1. **Yield**
   Cotton yields in Australia continue to be two to three times higher than world averages, reaching a world record of 2.14 tonnes of lint per hectare in 2008.

2. **Superior Quality Fibre**
   Australian cotton is acknowledged by buyers as a superior fibre due to superior staple length and strength, uniformity and low contamination.

3. **Quality Assurance**
   Cotton’s Best Management Practices (BMP) program now operates across ginning and classing as well as production, assuring a quality traceable product.

4. **Sustainable Production**
   Cotton grown under the BMP program is based upon sustainable production practices which are independently audited. Australian cotton has a comparatively low environmental footprint per unit of land or water use.

5. **Lead Time**
   Australian’s proximity to Asian markets allows our cotton to be delivered to spinning mills using just-in-time purchasing strategies, one to two weeks ahead of cotton produced by major competitors.

6. **Ethical Trade Practices**
   The Australian cotton industry upholds safe workplace conditions by international standards and respects the sanctity of trade contracts.