

POCKET GUIDE
TO
AUSTRALIAN
COTTON



COTTON
AUSTRALIA

cottonaustralia.com.au





OUR AUSTRALIAN COTTON INDUSTRY

Cotton plays a significant role in our everyday lives.

We sleep in cotton, dry ourselves with it, wrap our bodies in it, and we even cook with its oil.

The Australian cotton industry has a rich history.

The modern cotton industry emerged in the 1960s, and has evolved into one of Australia's agricultural success stories.

Over the decades, we have transformed our practices to be one of the world's leading cotton industries continually working to improve our water efficiency, sustainability and innovation.

In an average year, Australian farmers grow enough cotton to clothe half a billion people around the world, including jeans, t-shirts, underwear, and socks.

We produce some of the world's highest quality, highest yielding cotton.¹




Australian cotton
is carefully
grown, for you.

TODAY



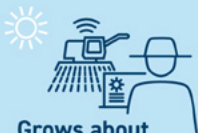
¹ Climate and agricultural risk: Assessing the impacts of major climate drivers on Australian cotton production, European Journal of Agronomy, 2022



AN AVERAGE AUSSIE COTTON FARM:



Directly creates jobs for **six people** and contributes to its local rural and regional economy²



Grows about **790 hectares**

of cotton in summer, but also produces other crops like wheat, sorghum, soybeans, and canola³



Is family owned and operated

Can produce over

223kg

of cotton per ML of water⁴

In addition to the lint a similar amount of cottonseed is also produced.

Is one of about

1,500 farms that grow cotton in Australia



66%
in NSW



33%
in QLD

² 2023 Australian Cotton Sustainability Update

³ CRDC 2023 Grower Survey

⁴ 2022 NSW DPI Water Productivity Benchmarking report



AN AVERAGE AUSSIE COTTON FARM:

Grows an average of

11



cotton bales

per hectare – more than 2.5 times the global average⁵

Is run by farmers with an average age of



49 years

21%



of the area of a cotton farm is remnant native vegetation, this includes natural areas, such as native vegetation, unfarmed areas, and riparian zones⁷

USES



30% less land

to produce one tonne of cotton lint compared to 1997⁶



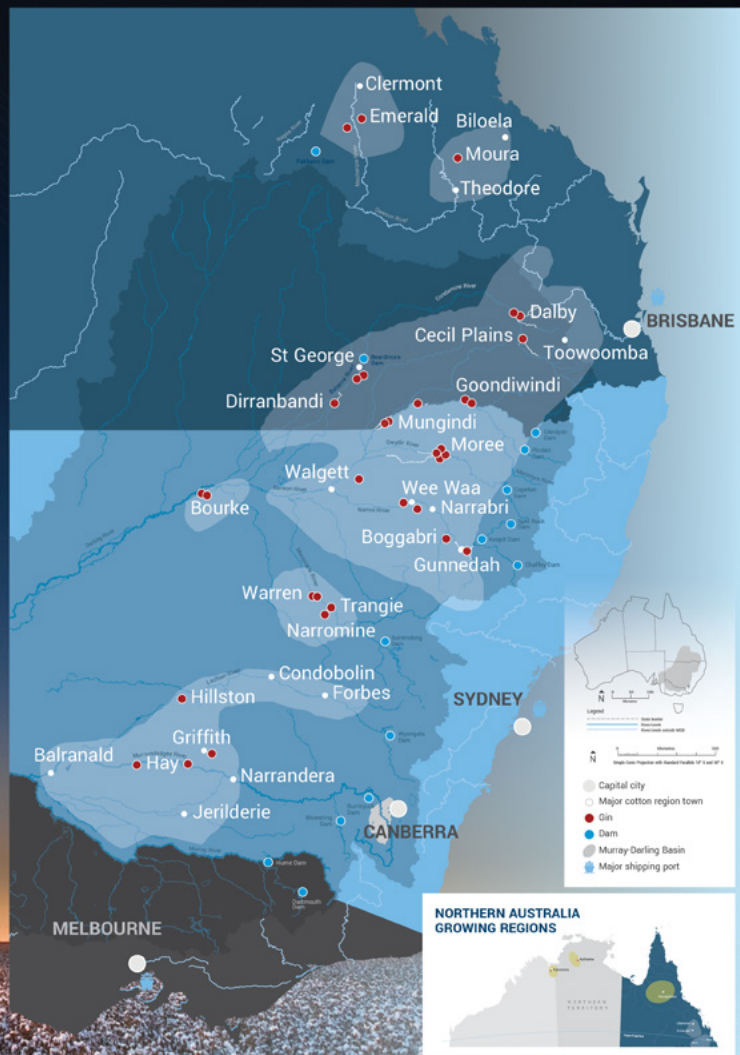
Grows cotton that is in high demand

due to its premium quality, reliability and sustainable production methods

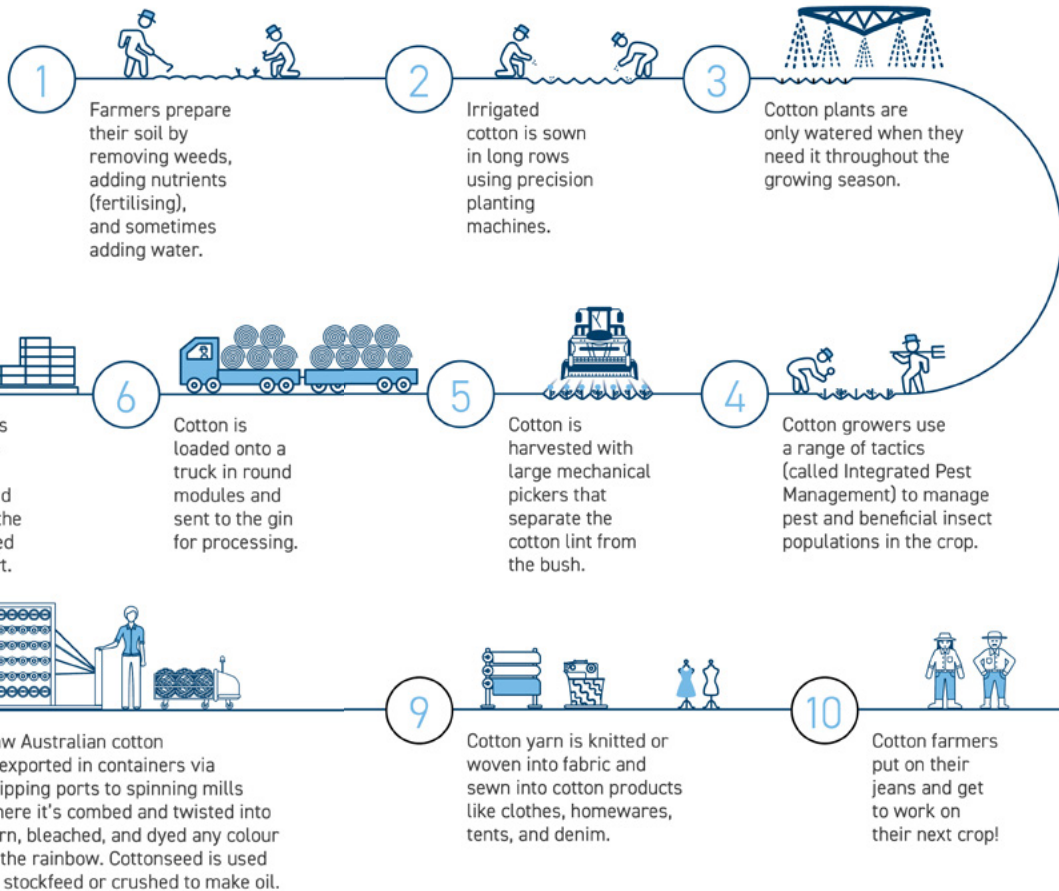
^{5,7} cottondata.com.au

⁶ 2019 Australian Sustainability Report

WHERE AUSTRALIAN COTTON IS GROWN



COTTON PRODUCTION CYCLE



AUSTRALIAN COTTON GROWING CALENDAR



Cotton Grower's Seasonal Tasks

Australia's cotton growing season lasts approximately six months, however, when cotton is planted and picked differs depending on the region.

Soil Preparation

- » Soil prepared for planting, weeds removed, nutrients added if necessary.
- » Soil moisture levels checked, pre-watering undertaken if necessary.

Planting

- » Soil temperature checked.
- » Cotton seed planted when soil is warm enough for satisfactory seed germination and crop establishment (i.e. soil temperature reaches 14°C at a depth of 10cm and is rising in temperature for at least three successive days).

Growing Season

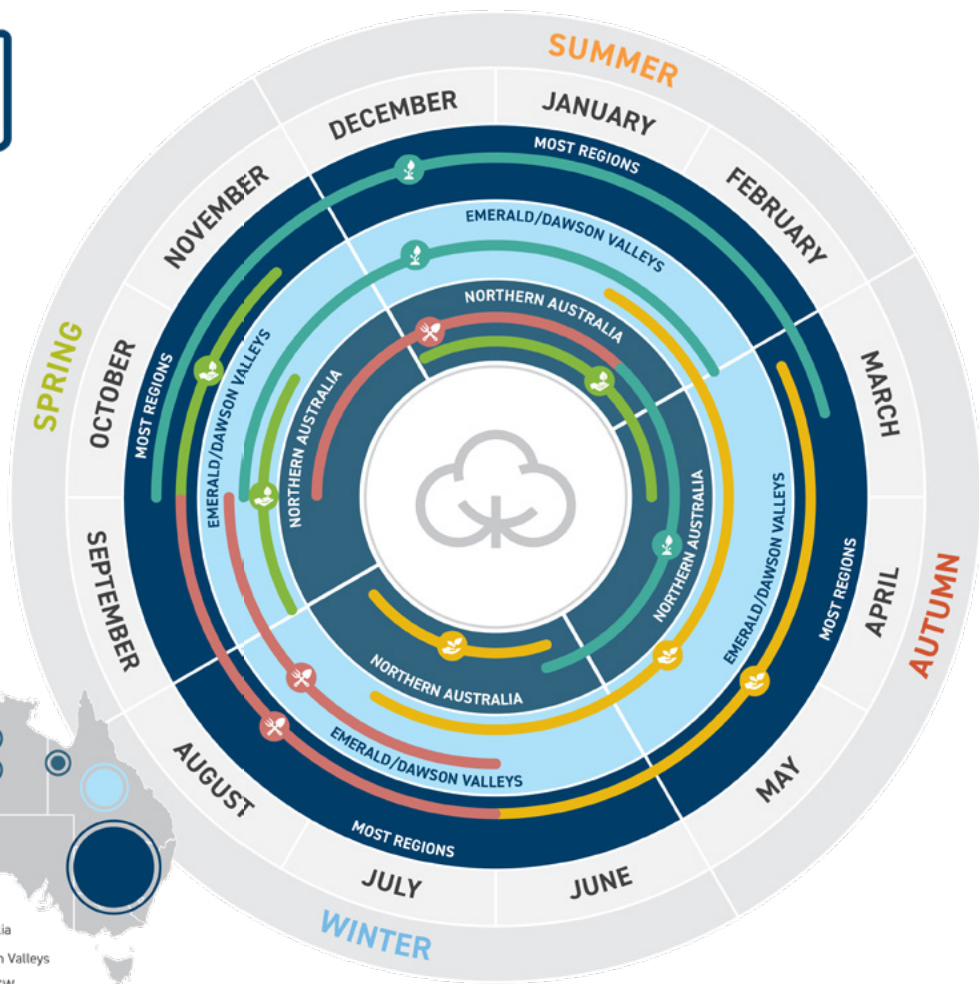
- » Flower buds develop a few weeks after the plant starts to grow, then flowers appear a few weeks later. The flowers then fall off, leaving a ripening seed pod that becomes the cotton boll (the fruit).

Picking

- » Defoliation is carried out to remove the plant's leaves and to crack the bolls open.
- » Growers harvest the cotton crop using a picker once most bolls have opened.



- Northern Australia
- Emerald/Dawson Valleys
- Most regions (NSW, Southern QLD, Northern VIC)



PRODUCTS AND USES OF AUSTRALIAN COTTON



One 227kg bale

of Australian cotton can produce one of these:



2100 PAIRS OF
BOXER SHORTS



3000
NAPPIES



215 PAIRS OF
JEANS



1200
T-SHIRTS



4300 PAIRS
OF SOCKS



250 SINGLE
BED SHEETS



COTTON CAREERS



POLICIES **P** Policy officer (biosecurity, energy, sustainability, water, workforce)

EDUCATION & TRAINING **E** Agricultural educator, Lecturer, Event coordinator, Farm skills provider, Resource content writer, App developer

RESEARCH **R** Scientists/Researchers in: Entomology, Agronomy, Breeding, Soils, Pathology, Weeds, Water Use Efficiency, Irrigation, Environment, Sustainable farming systems

FARMING AND FINANCE **F** Farm manager, Accountant, Farmhand, Yard supervisor, Irrigation manager, Cotton marketing (sales)

EXTENSION AND ADVISORY SERVICES **E** Agronomist, Crop consultant, Workplace health & safety officer, Bug checker, Cotton extension officer

COMMUNICATION **C** Digital content producer, Public relations, Marketing (industry), Journalist

TECHNOLOGIES AND TRADE **T** Agricultural engineer, Machinery operator (driver, harvest contractor, drone/plane pilot), Mechanical trades, Cotton gin worker, Fashion designer, Cotton classer, IT, Warehouse manager

WATER USE

Australia's cotton industry is considered one of the most water efficient in the world.⁸

Australian irrigated lint yields are now among the highest of any major cotton producing country in the world, being about two and a half times more than the world average.⁷

This, combined with appropriate varieties, a massive research effort, use of the latest technologies and cutting-edge farm practices, means Australian cotton growers produce more crop per drop than any other cotton-producing country.

⁸ Water-use efficiency and productivity trends in Australian irrigated cotton: a review. Crop and Pasture Science

⁷ Climate and agricultural risk: Assessing the impacts of major climate drivers on Australian cotton production. European Journal of Agronomy

¹⁰ Source: Australian Cotton Sustainability Report 2019

52%
less water
needed to grow
a bale of cotton
compared
to 1997.¹⁰



Water efficiency Australian Cotton's average irrigation requirement is 6-7 megalitres per hectare.¹¹ Since 1997, water use productivity by Australian cotton growers has improved by 52%.¹²



Cotton is only planted when sufficient water is made available from rivers and groundwater sources through government regulated water licensing schemes. When there's no water, there's no cotton.



The CSIRO breeds appropriate cotton varieties for Australian conditions and each grower selects the best and most efficient variety for their region and farm.



On-farm practices Once cotton is planted, growers make careful and considered decisions about the way they manage their water resources.



Australian Cotton uses a range of techniques to constantly improve water efficiency. Examples include the use of technology to measure soil moisture like soil moisture probes, on-farm weather stations and precision irrigation monitoring, so crops are only watered when they need it.¹³

¹¹ Water-use efficiency and productivity trends in Australian irrigated cotton: a review. Crop and Pasture Science

¹² Australian Cotton Sustainability report

¹³ 2019 Sustainability report

SUSTAINABILITY AND BEST PRACTICE

Sustainability has long been a key focus of the Australian cotton industry.

Today, Australian cotton growers grow more cotton on less land, with more efficient water use.



TODAY, PRODUCING A BALE OF AUSTRALIAN COTTON TAKES



52%
less water



34%
less land



97%
less insecticides

COMPARED TO 1997¹⁴

¹⁴ 2019 Australian Cotton Sustainability Report



The number of *myBMP* certified farms has increased by more than 77% in the past five years¹⁵



Over 45% of Cotton produced in Australia is *myBMP* certified¹⁶



myBMP (Best Management Practices) is a farm and environmental management program for cotton growers, to ensure Australian cotton is produced according to best practice.



The program has seen an increase in adoption across the industry, and *myBMP* allows growers and industry to access the latest technical data and research, find solutions to challenges, and provides practical tools to help growers operate at maximum efficiency.



Some of the *myBMP* program's benefits include developing safer farm workplaces, reducing input costs and ensuring farm businesses are better run.



The *myBMP* program also helps cotton growers to keep pesticide use to a minimum, control weeds and diseases, maximise water use efficiency, improved soil health and protect and retain native vegetation.

^{15, 16} cottondata.com.au

COTTON IS:

Natural, recyclable, biodegradable, reusable.

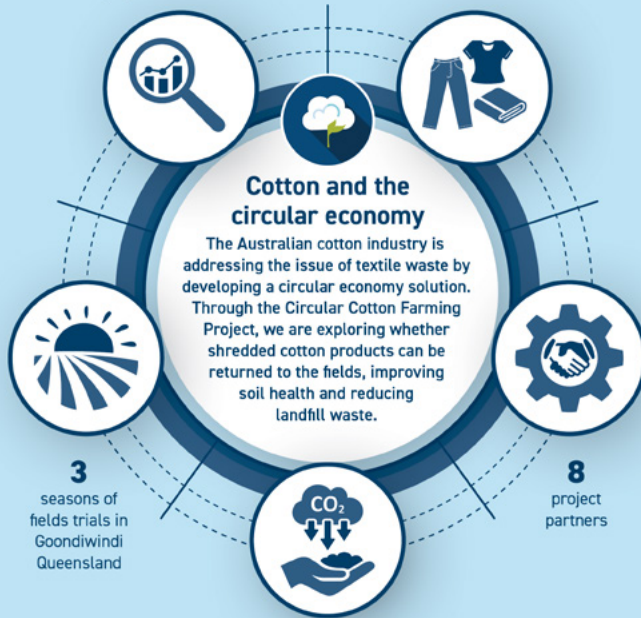


\$2 million

committed to further research and developing circular solutions

10 tonnes

of textile waste returned to cotton fields since 2021 in our trials



3
seasons of fields trials in Goondiwindi Queensland

8
project partners

11,250kg

of atmospheric CO₂ is estimated to have been mitigated by the trials

COTTON
FACTS



There are

43 species

of cotton in the world, and some cotton grows on trees.



Cotton and its by-products are used in the production of a huge range of items, including **some bank notes, margarine, rubber, and medical supplies.**



Cotton is a unique crop in that it is both a food and fibre //////////////

we cook with cottonseed oil that's flavourless and low in cholesterol.





BIOTECHNOLOGY, PESTS AND COTTON

Biotechnology refers to the use of cotton varieties with transgenic or genetically modified (GM) traits. Over the past two decades, Australian cotton growers have rapidly adopted GM cotton, and today more than 99.9% of Australia's cotton crop is grown with varieties containing biotech traits.¹⁷

Most of the yield gains in Australian cotton are attributed to plant breeding and improved seed technologies. At the same time, the use of biotechnology in cotton has made a significant contribution to the dramatic reduction in insecticides applied to Australian cotton crops.

Since 1997, the Australian cotton industry has achieved a 97% reduction in insecticide use. Cotton growers use a range of tactics (called Integrated Pest Management) to manage pest and beneficial insect populations in the crop, with some cotton crops not sprayed for pests at all. More than 100 different types of pests can attack cotton. If these 'bad bugs' are left unmanaged, the crop can be damaged and a grower can experience yield and quality losses in their crop.¹⁸



¹⁷ Office of the Gene Technology Regulator
¹⁸ 2019 Australian Cotton Sustainability Report



SCIENCE, TECHNOLOGY AND INNOVATION

Australian cotton growers, in a partnership with the Australian Government, invest \$4.50 per bale of cotton they produce each year into research that has delivered significant benefits to growers, rural communities and Australia. The cotton research and development effort is largely driven by cotton growers.

This research investment underpins the Australian cotton industry, and the industry is recognised as a world leader in the adoption of technology, innovation, environmental management, and the production of high quality, high yielding cotton.



AUSTRALIAN COTTON GROWERS ARE AMONG
THE MOST INNOVATIVE IN THE WORLD.



NEARLY

\$450m

invested in
cotton research
and development
since 1991¹⁹



98%

use integrated
pest management
(IPM) strategies
and practices²⁰



74%

of growers are
capturing and using
their on-farm data to
drive innovation²¹

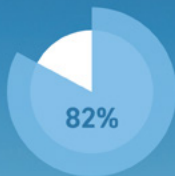
¹⁹ cottondata.com.au
^{20, 21} 2023 CRDC Cotton Grower Survey



COTTON COMMUNITIES

The cotton industry is very important to Australia's rural communities.

A SNAPSHOT OF AUSTRALIA'S COTTON INDUSTRY SHOWS:



Cotton growers, on average, spend **82%** of expenses* in their local area.



The majority of cotton business expenses are spent within the immediate local areas of farm businesses, and adjacent regional centres.²²



In a normal year, the industry provides work for more than

7,222 people²⁴

^{22, 23} 2023 Australian Cotton Sustainability Update



Cotton represents between **30% & 60%**

of the gross value of the agricultural production in regions where it is grown.²⁴



94% of cotton growers²⁵

regularly contribute to community activities such as events, sponsorships and charities, or are involved in local groups or sports teams.²⁵



The Australian cotton industry generated up to an estimated

\$7 billion in export earnings for 2023.²⁷

Cotton is grown in more than

249 regional communities



across NSW, Queensland and small areas of Victoria, northern Queensland, northern Western Australia, and the Northern Territory.²⁸

²⁴ CRDC ACIL Allen report: The Australian cotton industry

²⁵ 2023 Australian Cotton Sustainability Update

²⁶ 2023 CRDC Grower Survey

²⁷ ABARES

²⁸ cottodata.com.au







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Data is correct at date of publishing, September 2024