

THIS REPORT CONTAINS ASSESSMENTS OF COMMODITY AND TRADE ISSUES MADE BY USDA STAFF AND NOT NECESSARILY STATEMENTS OF OFFICIAL U.S. GOVERNMENT POLICY

Required Report - public distribution

**Date:** 3/29/2018

**GAIN Report Number:** AS1806

## Australia

## **Cotton and Products Annual**

# **April 2018**

#### **Approved By:**

Rey Santella, Agricultural Counselor

### **Prepared By:**

Roger Farrell, Agricultural Specialist

#### **Report Highlights:**

In 2018/19, Post forecasts Australian cotton production to reach 4.7 million bales from a harvested area of 450,000 hectares. This compares to 4 million bales in 2017/18 from a revised harvested area of 470,000 hectares due to poor seasonal conditions. Exports are forecast at 4.4 million bales in 2018/19 as a result of the larger harvest and strong international demand.

#### **Commodities:**

Cotton

#### **EXECUTIVE SUMMARY**

Cotton production is forecast at 4.7 million bales in 2018/19 while harvested area is expected to be 450,000 hectares, down from the official estimate. This reduction is due to low rainfall in most growing areas and crop damage caused by herbicide spray drift over an estimated 35,000 hectares. Post forecasts an increase in cotton exports in 2018/19 to 4.4 million bales as a result of anticipated higher production.

The harvested area for 2017/18 is revised from 580,000 hectares to 473,000 hectares, due to hot and drier weather conditions. Cotton growing in Australia is expanding because of higher returns relative to other crops, but water availability has been a constraint. In recent years, cotton farms have extended further into New South Wales (NSW) in competition with rice, citrus, and summer crops such as sorghum.

#### OVERVIEW AND SEASONAL OUTLOOK

Australia is one of the world's largest suppliers of raw cotton with 95 percent of the domestic crop exported, mainly to China, Indonesia, and Thailand. Cotton is predominantly irrigated and grown in NSW and southern Queensland. The major production area in NSW stretches south from the Macintyre River on the Queensland border and covers the Gwydir, Namoi, and Macquarie valleys. In NSW, cotton is also grown along the Barwon and Darling Rivers in the west, the Lachlan and Murrumbidgee Rivers in the south, and has been spreading into new regions such as Forbes.

In Queensland, cotton is grown mostly in Darling Downs, St. George, Dirranbandi, and the Macintyre Valley regions. Recently, cotton planting has extended into northern Victoria, the Gulf region of north Queensland and the Ord River region of the Northern Territory. See Chart 1 for a map of the major cotton growing areas in Australia. Cotton is planted from September in Queensland to mid-November in NSW and then harvested from March to June respectively. Australia's marketing year for 2018/19 begins in August 2018.

Australia is an efficient producer with one of the world's highest cotton yields due to the predominance of irrigation and the use of genetically modified varieties, which allow the comparatively low use of both pesticide and irrigation. Planted area for dryland cotton fluctuates significantly each year and depends on available soil moisture.

In Australia, variations in climatic conditions have a significant impact on the cotton industry. An expanded area of dryland cotton was planted in Queensland and NSW in October 2017 due to good soil moisture, but high temperatures and low rainfall in January and February 2018 adversely affected these crops. Moderate rainfall in late February offset some of the dry conditions. The Bureau of Meteorology's (BOM) latest rainfall outlook points to below average rainfall for most cotton growing areas for the next three months.

Condamine-Balonne Goondwind Border Rivers Macquarie-Castlereagh Lachlan Murrumbidgee

Chart 1: Cotton Growing Areas in Australia

Source: Australian Department of Agriculture

The emergence of southern NSW as a major cotton producer has moderated the impact of adverse climatic conditions as water reliability is higher in this region than in northern NSW or Queensland. Production in Lachlan, Murrumbidgee, and the Murray River regions is expected to account for at least 25 percent of the Australian cotton crop in 2018/19 and has been supported by an expansion in dryland cotton plantings and cotton gins.

The outlook for irrigated cotton has been affected by falling water levels in many dams. Post estimates that irrigated cotton will account for around 80 percent of the total crop in 2018/19. Low rainfall in late 2017 and early 2018 contributed to falling water levels in cotton growing areas throughout southern Queensland and NSW, although current dam capacity is expected to be sufficient for the 2018/19 crop (Table 1).

Table 1: Water levels for the Australian cotton industry, 2013-2018 (gigaliters)

	<u> </u>			-	10	0	/	
		Full Capacity	Act	ual Capa	city			
Dam	Region		(%)					
	-		2013	2014	2015	2016	2017	2018
Beardmore	Emerald	82	82	60	84	82	15	100
Leslie	Darling Downs	106	74	36	27	18	15	12
Glenlyon	Border Rivers	250	94	37	28	28	60	57
Pindari	Border Rivers	312	63	17	14	36	81	60
Copeton	Gwydir Valley	1,362	73	32	18	17	45	29
Split Rock	Namoi Valley	397	87	21	7	22	30	16
Keepit	Namoi Valley	425	40	16	6	12	55	14
Burrendong	Macquarie Valley	1,188	46	27	16	63	88	39
Windamere	Macquarie Valley	368	56	49	44	40	50	43
Wyangala	Lachlan Valley	1,220	71	57	37	42	88	70
Burrinjuck	Murrumbidgee	1,026	67	85	32	38	73	42
Total		8,037	66	43	39	30	55	n.a.

*Note:* The assessment of water in storage does not include water in private farm storages. *Source*: Murray Darling Basin Authority and Post estimates for March of each year.

Growing conditions for cotton worsened in early 2018 because of very low rainfall and hot conditions in both Queensland and NSW. However, moderate rainfall in the first week of February helped farmers ease the drought-like conditions in southern Queensland and is expected to result in slightly higher yields. In the Darling Downs region of Queensland, an intense storm in December 2017 damaged the cotton crop while dry conditions in early 2018 also reduced the production area. In southern NSW, rainfall in late February spurred crop development and improved yields.

Rainfall and temperature conditions over the next two months will impact the development of the 2018/19 cotton crop. Post notes that the latest BOM projections warn of "below average" rainfall and "above average" temperatures across some cotton producing regions. Charts 2 and 3 show forecasts of rainfall and temperatures across Australia's main cotton producing regions.

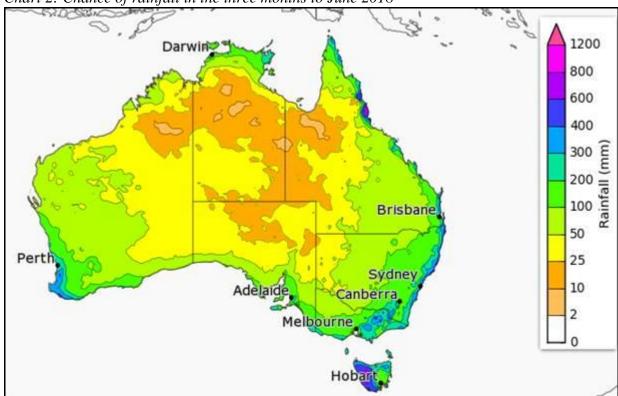
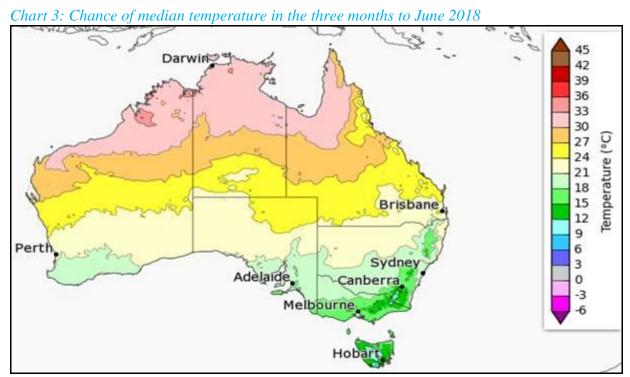


Chart 2: Chance of rainfall in the three months to June 2018

Source: Bureau of Meteorology (2018)



Source: Bureau of Meteorology (2018)

#### **PRODUCTION**

Australian cotton production is forecast at 4.7 million bales (480 pounds) in marketing year 2018/19 compared to 4 million bales in 2017/18. The harvested area is revised down significantly to 450,000 hectares from the official estimate of 530,000 hectares. This is due to low rainfall in most growing areas and crop damage caused by herbicide spray drift over an estimated cotton growing area of 35,000 hectares. Industry sources indicated that the spread of weed-control herbicides to non-targeted areas occurred through unpredictable weather conditions.

Irrigated cotton accounts for at least 80 percent of total production, while dryland (or rain-fed) cotton depends on timely and sufficient rainfall. In 2018/19, Australia's planted cotton area continues to extend into southern NSW, northern Victoria, and northern Queensland, particularly in the Gulf country and the Ord. The Murrumbidgee region of southern NSW emerged as the third largest cotton region in 2017/18 with around 70,000 hectares of cotton planted and more than 240 cotton farms in the region compared to only 50 in 2010. This region has predominantly been a rice growing region, but profitability has convinced many farmers to switch to cotton farming. Overall, there are over 1,000 cotton growers in Australia.

Australia's cotton gins are located in regional areas where cotton is grown, in order to reduce transport costs. The gins separate cottonseed and trash from the lint or raw cotton fiber. An Australian cotton bale weighs 227kg (500 pounds) and this is converted to U.S. bales (480 pounds). Cottonseed represents approximately 50 percent of the weight of ginned cotton while cotton fiber represents around 40 percent of the weight of ginned cotton. The movement of cotton from farm to gins is predominantly by road transportation and destined to the three major ports of Sydney, Brisbane, and Melbourne.

2018/19 is only the second season Australian farmers are utilizing the Bollgard 3 cotton variety. More than 95 percent of the 450,000 hectare cotton crop in 2018/19 was planted with Monsanto's Bollgard 3 varieties because of its higher yields and resistance to weed and insects. The variety's tolerance to herbicide has also reduced the need for broad spectrum pesticide use while proteins in the cotton plant inhibit damage from heliothis moths, which is normally a major cotton pest. Australia approved the use of the Bollard 3 cotton variety in 2016.

Traditionally, cotton has been planted in September and October, but planting with the Bollgard varieties has extended the planting window. For instance, farmers in central Queensland planted cotton as early as August 2017 and in western NSW as late as December 2017. The harvesting period for cotton now extends from January to June 2018. Yields vary across regions, but are expected to rise over time provided that climatic conditions allow this to occur. In central Queensland, growers have averaged between 10 and 15 bales per hectare for irrigated cotton in recent years, but the national average for irrigated cotton is around 10 bales per hectare. Yields on dryland cotton are much lower at 1-3 metric ton (MT) per hectare.

Exports are forecast at 4.4 million bales in 2018/19 because of the larger harvest and strong international demand. Australia exports around 95 percent of its raw cotton as there is no domestic textiles industry. The leading markets for Australian exports of cotton include China, Bangladesh, Vietnam, and India (see Table 2).

Table 2: Australian exports of cotton by major country, 2012-2017 ('000 MT)

	1	3	<i>y</i>	J,	,	/
Country	2012	2013	2014	2015	2016	2017
World						
('000 MT)	1,211	1,166	894	446	711	873
(US\$/MT)	(2,231)	(2,117)	(2,073)	(1,796)	(1,708)	(1,873)
China						
('000 MT)	822	767	494	265	206	136
(US\$/MT)	(2,232)	(2,142)	(2,092)	(1,809)	(1,681)	(1,825)
India						
('000 MT)	15	10	26	14	152	71
(US\$/MT)	(2,052)	(2,095)	(2,033)	(1,860)	(1,696)	(1,892)
Vietnam						
('000 MT)	23	38	78	48	98	152
(US\$/MT)	(611)	(611)	(522)	(413)	(417)	(375)
Bangladesh						
('000 MT)	40	52	46	11	85	156
(US\$/MT)	(2,161)	(2,157)	(2,088)	(1,821)	(1,744)	(1,900)
Indonesia						
('000 MT)	110	87	78	42	75	40
(US\$/MT)	(2,272)	(2,109)	(2,084)	(1,699)	(1,733)	(1,906)

*Note:* Calendar years. *Source*: Global Trade Atlas

In 2017, Australia ranked as the third largest exporter of cotton in the world, behind the United States and India, and just ahead of Brazil. Australia also exports cottonseed, a by-product of cotton gin processing, for animal feed to Japan (crushed and cattle feed), Korea (crushed cattle feed), and China (crushed cattle feed).

Table 3: Production, Supply and Demand Estimates: Cotton, 2016/17 to 2018/19

Cotton	2016/2017		2017/201	18	2018/2019		
Market Year Beginning	August 2016		August 20	)17	August 2018		
Australia	USDA	New	USDA	New	USDA	New	
	Official	Post	Official	Post	Official	Post	
Area Planted	0	0	0	0	0	0	
Area Harvested	312	312	580	473	530	450	
Beginning Stocks	1,818	1,818	1,955	1,955	2,393	2,387	
Production	2,850	2,850	4,050	4,037	4,700	4,700	
Imports	0	0	0	0	0	0	
MY Imports from	0	0	0	0	0	0	
United States							
Total Supply	4,668	4,668	6,005	5,992	7,093	7,087	
Exports	2,828	2,828	3,727	3,720	4,400	4,400	
Use	35	35	35	35	35	35	
Loss	-150	-150	-150	-150	-150	-150	
Total Domestic	-115	-115	-115	-115	-115	-115	
Consumption.							
Ending Stocks	1,955	1,955	2,393	2,387	2,808	2,802	
Total Distribution	4,668	4,668	6,005	5,992	7,093	7,087	
Stock to Use %	68.29	68.29	63.61	63.57	63.31	63.18	
Yield (kg/ha)	1,989	1,989	1,520	1,858	1,931	2,274	

(1000 HA),1000 480 lb. Bales, (PERCENT), (KG/HA) *Notes*: (a) 'New Post' assessments are not official data.

(b) Data in the table is in '000 bales.