COTTON :
Review of the World Situation

International Cotton Advisory Committee

Discover Natural Fibres Initiative

Volume 69 - Number 5
May-June 2016

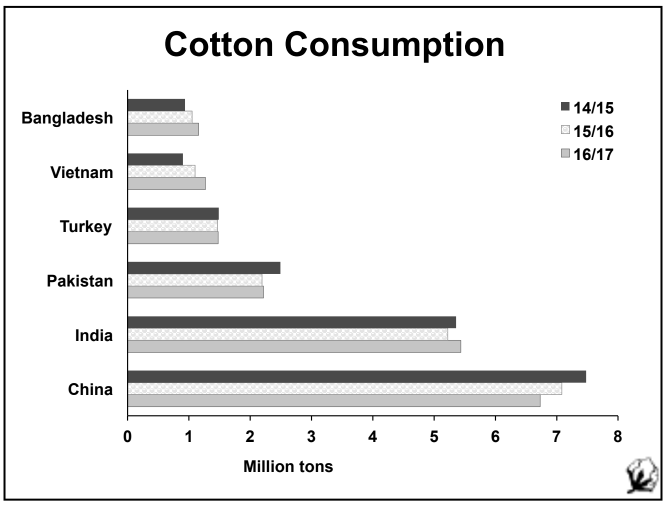
Table of Contents

Tables

SUMMARY OF THE OUTLOOK FOR COTTON

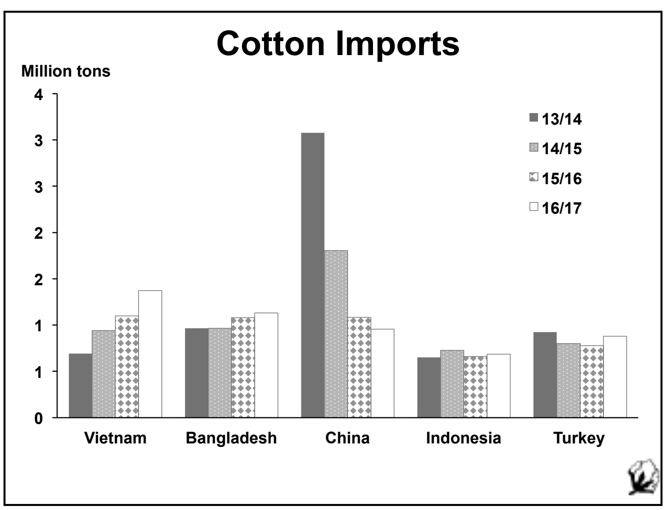
World Cotton Consumption Drops

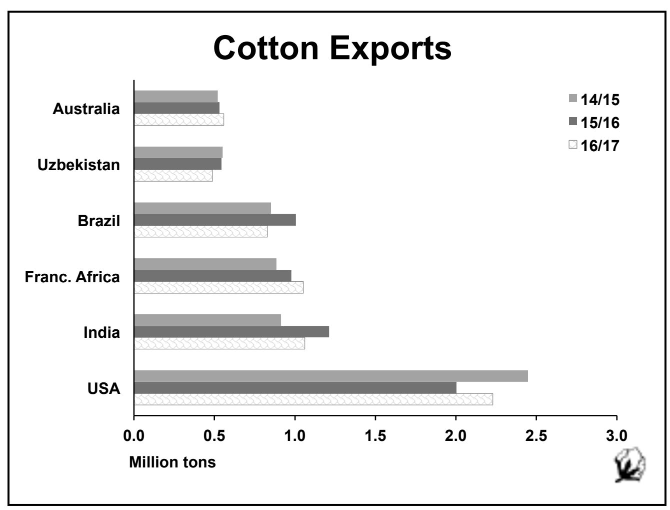
In 2015/16, world cotton consumption declined by 3% to 23.6 million tons and will likely remain at the same level in 2016/17 due primarily to low polyester prices and weak global economic growth. After reaching a record level of 10.9 million tons in 2007/08, cotton consumption in China has declined in each subsequent season with the exception of 2009/10. However, China remains the world's largest consumer and mill use is estimated at 7.1 million tons in 2015/16. High domestic cotton prices, particularly compared with those of polyester, are expected to cause China's cotton consumption to decrease by 5% to 6.7 million tons in 2016/17. However, mill use is anticipated to increase in several other large cotton consuming countries, which would offset the decline in China. After falling by 3% in 2015/16 to 5.2 million tons, cotton consumption in India is expected to rise by 4% to 5.4 million tons in 2016/17 due to favorable textile export policies, well integrated downstream industries and competitive prices. After three seasons of growth bolstered by China's demand for cotton yarn, mill use in Pakistan fell by 12% to 2.2 million tons in 2015/16 due to the ongoing energy crisis, high costs of production, and weak cotton yarn demand. Mill use in Pakistan is forecast to rise by 1%, to a little over 2.2 million tons in 2016/17. Bangladesh and Vietnam are projected to see significant growth in 2016/17, with mill use increasing by 16% to 1.3 million tons in Vietnam and 10% to 1.2 million tons in Bangladesh.



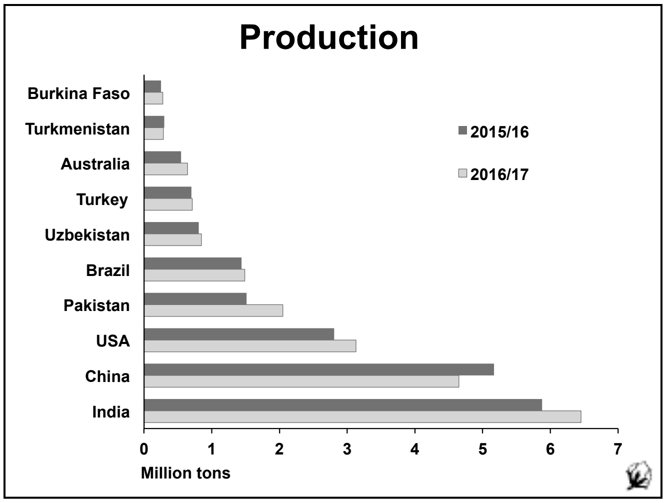
China began selling cotton from its national reserve last month as part of its efforts to reduce its large cotton stockpile. The total volume sold reached 450,000 tons as at the time of writing, which reduces the total volume in China's reserve to around 10.6 million tons. Sales have been robust with nearly all domestic cotton and all imported cotton on offer being purchased. Higher quality cotton is in limited supply due to restrictions on imports in 2015 and 2016 as well as the variable quality of the 2015/16 domestic cotton crop. While much smaller in scale, China's exports of cotton lint in 2015/16 are expected to reach 31,000 tons, a level which was last observed in 2010/11.

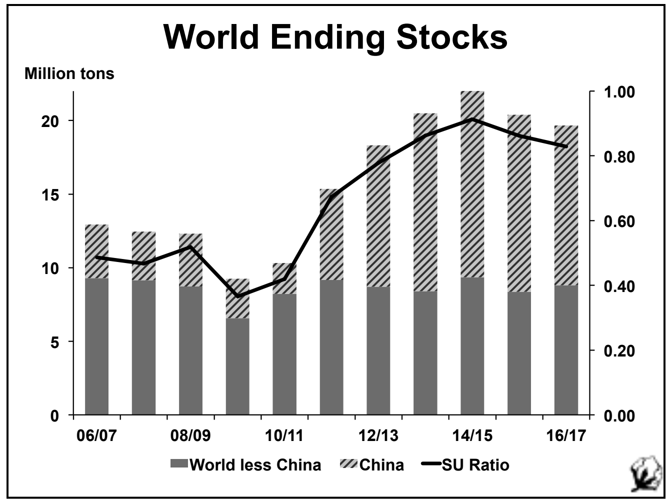
Imports by China are forecast to fall by 12% to 960,000 tons in 2016/17 due to the government's desire to reduce its cotton reserve stock and restrict imports. However, imports by the rest of the world are expected to increase by 3% to 6.5 million tons, with Vietnam and Bangladesh emerging as the world's largest importers, accounting for 34% of the world's imports. World cotton imports are forecast to increase by 1% to 7.4





Cotton (ISSN 0010-9754) is published every two months by the Secretariat of the International Cotton Advisory Committee, 1629 K Street, NW, Suite 702, Washington DC. Editor: Rebecca Pandolph <rebecca@icac.org>. Desktop publishing: Carmen S. León. Subscription rate: $245.00 (hard copy); $200.00 (electronic version). Send address changes to COTTON, 1629 K Street, NW, Suite 702, Washington DC 20006-1636.





million tons in 2016/17. Vietnam's imports are projected to grow by 25% to 1.3 million tons and Bangladesh's by 5% to 1.1 million tons. Exports from the United States are anticipated to rise by 11% to 2.2 million tons in 2016/17, due to increased domestic production and ample carryover stocks. After rising 33%, exports from India are forecast to decline by 13% to 1.1 million tons in 2016/17 as growing consumption reduces its exportable surplus. Exports from francophone Africa are expected to increase from 980,000 tons in 2015/16 to 1 million tons in 2016/17.

In 2015/16, world cotton production dropped by 17% to 21.8 million tons as world cotton area shrank and many countries experienced below-average yield. However, production is forecast to increase by 6% to 23 million tons as world cotton area expands and yields improve. India is likely to maintain its place as the world's largest producer in 2016/17 and its production is projected to increase by 10% to 6.5 million tons. Production in China is expected to fall by 10% to 4.6 million tons due to reduced subsidies and high production costs. Better prices for cotton compared with competing crops and improved yield may lead production in the United States to rise by 12% to 3.1 million tons. If yields recover, production in Pakistan is forecast to increase by 35% to 2 million tons in 2016/17.

World ending stocks are expected to decrease by 4% to 19.7 million tons by the end of 2016/17, which would follow an 8% reduction in stocks to 20.4 million tons in 2015/16. However, ending stocks outside of China are projected to rise by 3% to 8.8 million tons in 2016/17. In 2015/16, the world stock-to-use ratio is 86% and is expected to decrease to 83% in 2016/17.

CHINA'S COTTON POLICY AND ITS IMPACT ON PRODUCTION AND MILL USE

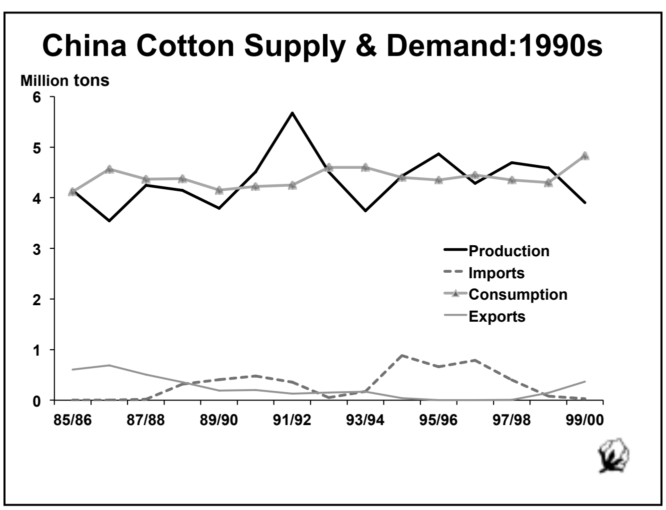
By Rebecca Pandolph, ICAC

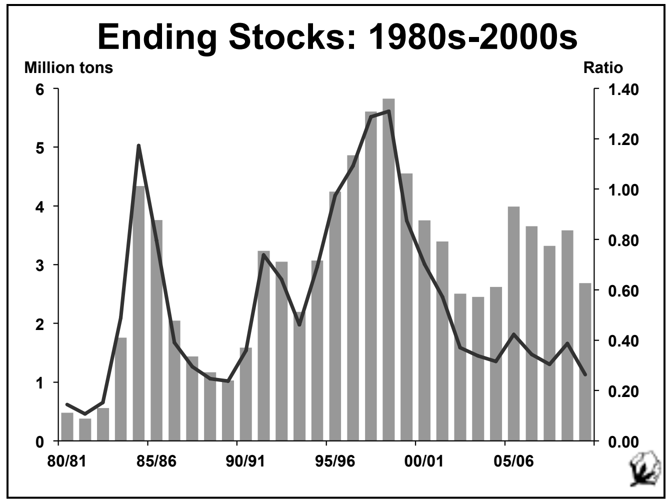
China became the world's largest producer of cotton in 1983/84, after having become the largest consumer in 1970/71. During the 1980s, China was usually a net exporter, but the country became the world's largest importer during the mid-1990s. Import volumes increased significantly since the mid-2000s as the growth in mill use outpaced production. As China's cotton sector has grown, so has its policies' influence on the world cotton market. This paper will examine the evolution of China's cotton policy since the 1990s and the impact that its policies have on domestic production, consumption and trade of cotton.

1990s-Towards Market Liberalization

China's cotton policies in the late 1980s and 1990s were designed to allow farmers greater independence in the marketing of cotton, to give textile mills more freedom in purchasing cotton and to limit price fluctuations. Farmers sold cotton under a contract with a specified procurement price, which was lower than prevailing prices on the international market. The Chinese economy was organized by province, with the procurement and distribution of cotton between provinces controlled by the national government. Sales outside of this system, however, were illegal. China's annual cotton production in the 1990s averaged 4.5 million tons per year, while ranging between 3.7 million tons and 5.7 million tons. It declined from 5.7 million tons in 1991/92 to 3.7 million tons in 1993/94 as low procurement prices made cotton less attractive to plant, leading to a significant decrease in planted area. In 1992/93 and 1993/94, when low production resulted in tight supplies, rising black market prices encouraged producers to sell part of their production to non-government buyers. Additionally, provincial governments and cotton companies in the provinces began hoarding cotton in response to rising prices. Although cotton area expanded by 13% to 5.6 million hectares in 1994/95 in response to high prices during the previous season, it decreased in each subsequent season until 2000/01. The national average yield improved from 750 kg/ha in 1993/94 to 1,025 kg/ha in 1997/98, resulting in an annual production of around 4.5 million tons in the second half of the 1990s. In September 1999, after building up ample stocks as a result of several years of better-than-expected harvests and substantial imports, the Chinese government implemented reforms to the cotton price and distribution systems that increased the influence of market forces on domestic cotton prices. Under the new market-oriented reforms, the government still set a reference price for cotton, but actual prices were negotiated between buyers and sellers and could fall below the reference price. In 1999/2000, the government set the reference price at 10,000 yuan per ton, which was 22% lower than the procurement price for 1998/99 and 30% lower than in 1997/98. As a result, the area under cotton contracted by 16% to 3.8 million hectares, the smallest since 1950, and production fell to 3.9 million tons.

During the 1990s, mill use averaged 4.4 million tons per year. From the mid-1990s onwards, the textile industry in China began to eliminate or upgrade older machinery, while also shifting the location of spindles toward Xinjiang and other areas with excess cotton production. However, high cotton prices relative to those of competing manmade fibers limited the growth in cotton consumption in China, particularly in the second half of the 1990s.





During much of the 1990s, the China National Textiles Import & Export Corporation (Chinatex), a specialized foreign trade corporation, was a key agent for implementing cotton trade policy by taking on a monopoly role in the import and export of cotton. Trade policy focused on target volumes of imports and exports, which were based partially on expected supply and demand during a given season, but also on the forecast impact on the balance of cotton supplies. Imports averaged around 385,000 tons a season during the 1990s, representing about 10% of mill use. Imports rose in seasons when production fell short of consumption, but also when domestic cotton was diverted to the national reserve or when inefficiencies in transporting cotton between different regions in China reduced the supplies available to textile mills. By the mid-1990s, China had become the world's largest importer due to expanding import quotas. In addition, new entities besides Chinatex were given the right to purchase cotton imports. However, in the last two years of the decade, imports fell under 100,000 tons, due to the significant volume of carryover stocks from previous seasons. Cotton stocks had increased significantly by the end of the 1990s and, in response, the Chinese government tightened its cotton import policy. Exports during the first half of the 1990s averaged 140,000 tons. In 1995/96, exports dropped to 5,000 tons and remained around that level for the remainder of the decade.

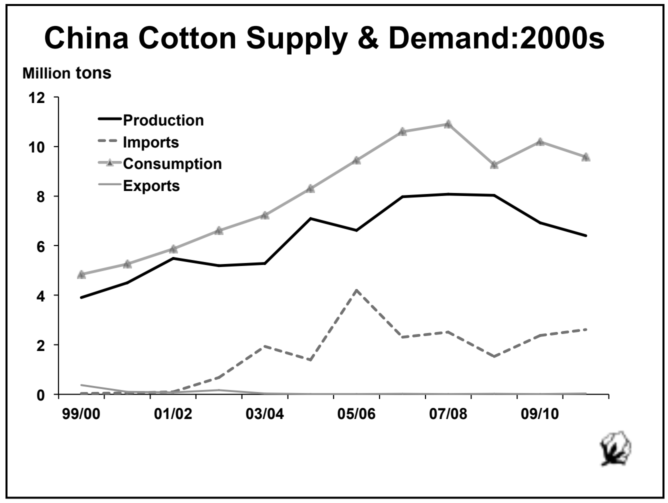
From 1989/90 to 1998/99, cotton stocks increased from around 1 million tons to nearly 6 million tons, with the stock-to-use ratio rising from 25% to 131% by the end of the decade. Stocks were held not only by textile mills or other users, but also by provincial governments and the national government in order to control prices. In the second half of the 1990s, the government of China sought to reduce its large stocks by allowing state mills to procure cotton directly from farmers, with the objective of broadening marketing channels. Furthermore, the government also attempted to reduce production in eastern provinces such as Hebei, Shandong and Henan, while stabilizing output in the western Xinjiang Autonomous Region.

2000s-Market Liberalization Continues

The government maintained the reforms implemented in 1999 during the next decade. In much of this time, government policies in China supported cotton production by exercising border protection, based on sliding scale duties or direct purchases by the government for its reserves. During the first few seasons of the decade, the national policy was to reduce cotton stocks through sales from government reserves, but also by subsidizing cotton exports. In 2003, the China National Cotton Reserve Corporation (CNCRC) was established as the agency responsible for managing the state reserve, which serves as a national buffer stock of cotton. During this decade, CNCR made purchases or sales in order to maintain an optimal level of stocks as well as to attempt to stabilize prices. Domestic prices became more market-oriented as the government sought to reduce stocks, but were often higher than international prices as a result of government interventions and quotas. The cultivated area expanded from 4.1 million hectares in 2000/01 to 6.3 million hectares in 2007/08 as higher prices encouraged farmers to plant more cotton. The national yield grew by 3% a year, from 1,100 kg/ha in 2000/01 to 1,300 kg/ha at the end of the decade. As a result, cotton production also greatly increased during the decade, from 4.5 million tons at the start to over 8 million tons in 2007/08.

The admission of China into the World Trade Organization (WTO) became effective on January 1, 2002. Under the terms of its accession into the WTO, China agreed to issue a calendar year tariff-rate import quota (TRQ) with a tariff of 1%. The TRQ increased from 734,000 tons in 2000 to 894,000 tons in 2004 and remained at that level in following years. Starting in 2003, in addition to these annual "regular" TRQs (associated with a 1% duty), China released supplementary TRQs from one to several times a year. Additional TRQs of 500,000 and 1 million tons were released in 2003 and 2004, respectively, with a 1% duty. After four seasons in which import volume did not exceed 100,000 tons, it jumped to 682,000 tons in 2002/03 and just under 2 million tons in 2003/04. Starting in 2005, the additional TRQs were associated with higher duties, calculated based on a sliding scale. Between 2005 and the second quarter of 2008, these additional TRQs ranged from 200,000 to 1.5 million tons. The additional quotas might carry a tariff of 1%, or be based on a sliding scale that ranged between 5% and 40%. The purpose of the sliding scale was to ensure that the effective cost of imported cotton exceeded international market prices. In turn, this boosted domestic prices paid to farmers in China. In 2005/06, imports reached 4.2 million tons following a season of reduced stocks and a 7% decline in domestic production.

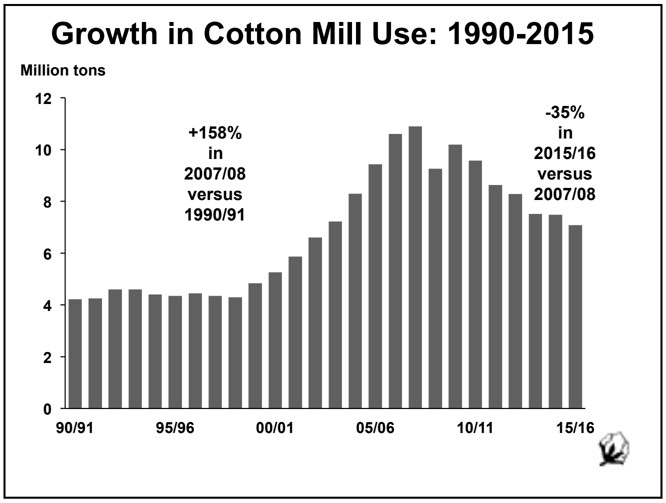
Between 1999/2000 and 2007/08, cotton mill use in China more than doubled, accounting for 85% of the increase in global mill use during that period. In 2007/08, 41% of world cotton mill use took place in China, with the provinces of

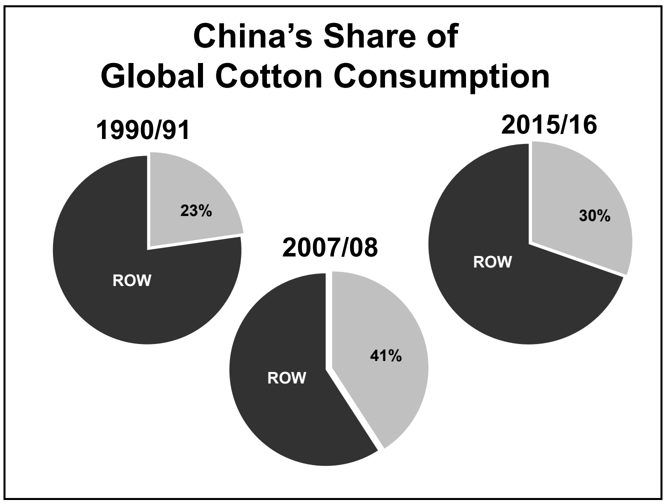


Shandong and Jiangsu accounting for about half of the cotton consumed. The considerable increase in cotton mill use in China was driven by an expansion of the domestic textile industry, lifted by a significant increase in textile exports, and some domestic textile consumption. China also benefited from the abolition of quotas on textile and apparel trade amongst WTO members in January 2005. Despite the restrictions on exports of textile and clothing to the European Union and the US implemented in 2005/06, Chinese textile and apparel exports to those countries increased significantly. In 2007/08, cotton mill use in China peaked at 10.9 million tons and its import volume was the second highest on record at 2.5 million tons.

However, the world economic recession and resulting contraction in demand for textiles caused mill consumption to drop 15% to 9.3 million tons in 2008/09. A decrease in the price competitiveness compared with polyester and increased competition from India, Bangladesh and Vietnam also contributed to the decline.

In 2008/09, the Chinese government did not use sliding-scale cotton import quotas, but instituted direct purchases of considerable amounts of cotton for government reserves in order to boost prices at the producer level. These purchases pushed producer prices above international prices. The CNCRC bought a total of 2.7 million tons of cotton, or about a third of estimated 2008/09 production of 8 million tons. This amount was significantly larger than previous purchases. In June 2009, the government approved an additional quota for imports of 400,000 tons with no duty, for processing and exports of manufactured goods. Imports in 2008/09 fell by 40% to 1.5 million. The cotton purchased for the government reserve was bought at a base procurement price of 12,600 yuan/ton for Type 328 cotton, which is of medium staple length. Most of the reserve cotton was sold to mills in 2008/09 (1.2 million tons), 2009/10 (1.4 million tons) and 2010/11 (1 million tons). Consumption rose by 10% to 10.2 million tons in 2009/10 due to strong domestic demand. Furthermore, the crisis drove many of the smaller, less efficient textile





enterprises out of business, thus reducing overcapacity in the sector and allowing the more efficient enterprises to stage a faster recovery. Sales from the reserve also slowed the increase in domestic prices, which also helped cotton mill use to bounce back. However, mill use then declined by 6% in 2010/11, to an estimated 9.6 million tons. The significant increase in cotton prices that season, combined with increasing labor shortages, rising energy costs, a strengthening currency, credit tightness and accumulating cotton yarn stocks in the second half of the season severely impacted profit margins at spinning mills. Many small- or medium-sized mills were forced to suspend their activities, temporarily or completely. During 2010/11, total Chinese cotton stocks declined by 22% to 2.1 million tons, the lowest volume since 1990/91 and equivalent to 22% of mill use.

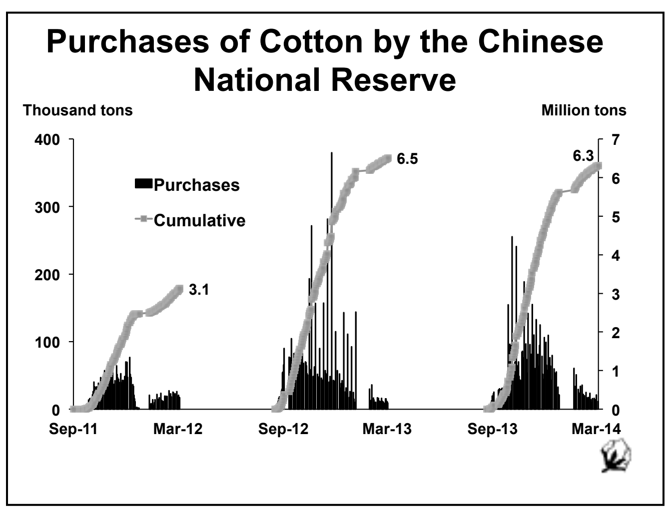
2011/12-2013/14-Building up the National Cotton Reserve

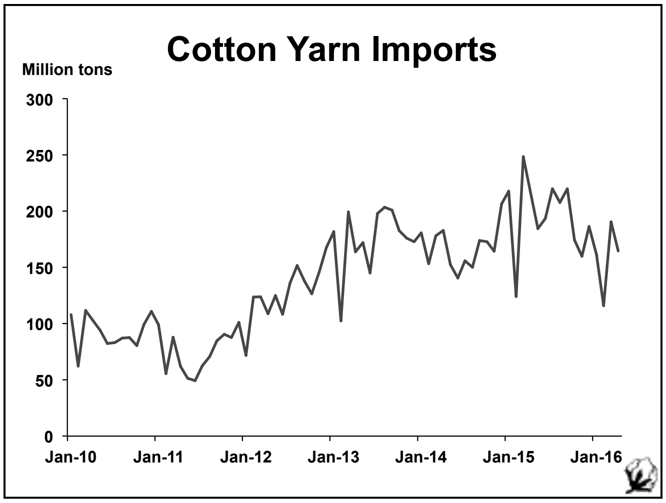
In response to high prices and a severe shortage of cotton in 2010/11, the Chinese government changed its cotton policy. From 2011/12 to 2013/14, China implemented a system of minimum support prices, by directly purchasing cotton from domestic producers to support them in a scenario of declining prices, and a rebuilding of the government strategic reserve. The state reserve procurement price for 2011/12 was set at 19,800 yuan per ton for Type 328 (around 141 US cents per pound). The CNCRC purchased 3.1 million tons of domestic cotton and imported a large quantity of foreign cotton. In 2011, the government used the same sliding scale duty quotas as in 2010, in addition to the TRQ of 1% for 894,000 tons. Despite mill use declining by 10% to 8.6 million tons, imports climbed to a record of 5.3 million tons, accounting for 55% of world cotton imports.

The CNCRC purchased over 6.5 million tons from September 2012 through March 2013, which accounted for 89% of domestic production in the 2012/13 season. The state reserve procurement price was set at 20,400 yuan/ton (147 US cts/lb at the seasonal average exchange rate). In January 2013, the Chinese government started to auction cotton from its reserve to mills at prices averaging 135 US cts/lb. The Chinese government sold off 3.7 million tons of cotton in 2012/13, with the total volume of government reserves amounting to 7.4 million tons at the end of the season.

Purchases and sales by the CNCRC followed a similar pattern in 2013/14. The Chinese government purchased 6.3 million tons of cotton for the state reserve at the same price level as in the previous season. The starting prices in auctions were reduced by 4% and about 2.2 million tons were sold from the reserve. Total government reserves peaked at over 13 million tons in March 2014 before auction sales began in earnest. The size of the reserve at the end of 2013/14 is estimated at 11.6 million tons, equivalent to 156% of mill use by China in that season and representing 57% of world stocks.

Despite the official announcement of unlimited reserve procurement at levels well above international cotton prices in 2011/12, 2012/13, and 2013/14, production declined as grains became more profitable and production costs rose (especially those of labor, as farmworkers migrated to cities in search of employment). After expanding by 7% to 5.5 million hectares in 2011/12, the cotton area in China contracted in the





following two seasons. The area under cotton declined by 5% to 4.7 million hectares in 2012/13 and by 10% to 4.3 million hectares in 2013/14. However, yield improved in both seasons, which offset, to a certain extent, the decline in production. China's cotton production fell by 1% to 7.3 million tons in 2012/13 and 5% to 6.9 million tons in the following season.

Three seasons of implementation of this policy of rebuilding government reserves by the Chinese government provided support to domestic and international prices and helped keep world trade buoyant. At the same time, this policy caused mill use and the market share of cotton in China to shrink due to high domestic cotton prices. Rising production costs (labor, energy and credit), labor shortages, and currency appreciation also affected the competitiveness of China's textile industry. In 2012/13, the lackluster economic situation in Europe and in the United States (the two major export destinations for China's textile products) and continuing uncertainty surrounding the government's domestic cotton policy and financial policy further contributed to a reduction in cotton spinning activity in China. Cotton consumption decreased by 4% to 8.3 million tons in 2012/13 and fell by an additional 9% to 7.5 million tons in 2013/14. However, unlike cotton lint, there are no quotas or taxes on imports of cotton yarn. As a result, cotton yarn imports began to replace domestic yarn production. Much of the imports came from other Asian countries with lower production costs, particularly India, Pakistan, and Vietnam.

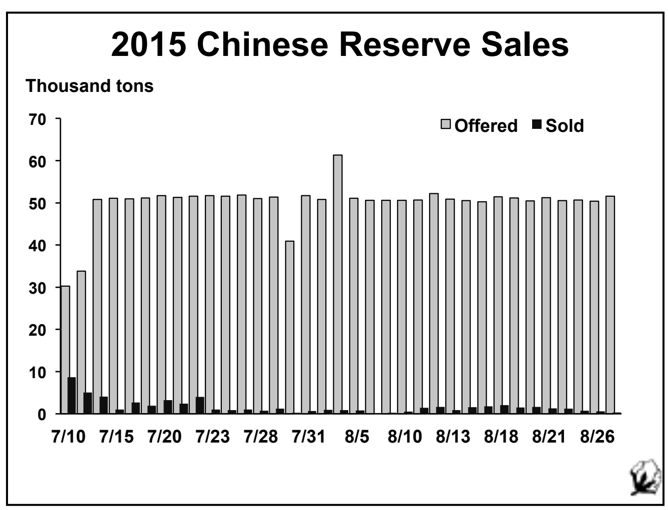
2014 Onwards

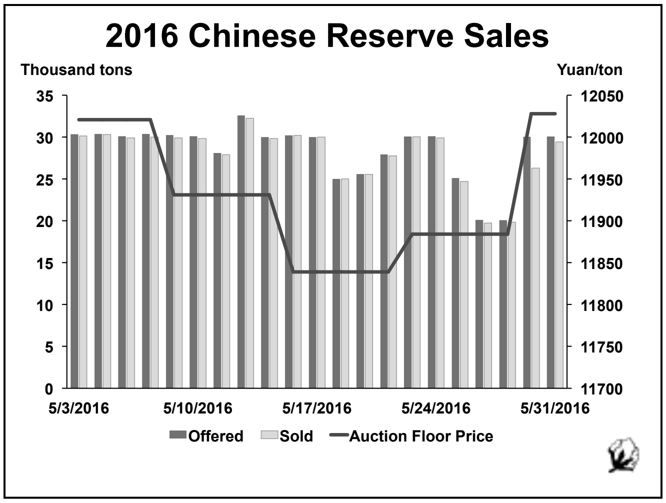
In late January 2014, the Chinese government announced that it would implement a target price program of 19,800 yuan/ton (about 146 US cts/lb at the average seasonal exchange rate), limited only to cotton grown in Xinjiang. Under this new direct subsidy system, the Chinese government pays growers in Xinjiang the difference between the target price and the average market price for cotton. No subsidy was announced for regions outside of Xinjiang until after harvesting for the 2014/15 crop had begun and this subsidy was limited to around 2,000 yuan per ton, or about one third of the payment made to farmers in Xinjiang. Chinese cotton area declined from 4.7 million hectares in 2013/14 to 4.3 million hectares million hectares in 2014/15, which represents the smallest area planted to cotton since 2000/01, when area reached 4.1 million hectares. In contrast, the area under cotton outside of China expanded by 6% to 29.8 million hectares as higher international cotton prices compared to competing crops made cotton more attractive to plant.

Unlike previous seasons, sales from the reserve did not begin until July 10, 2015, near the end of the international cotton season. The government held an extended auction through the end of August, but only 330,000 tons were sold. Including sales from August 2015, the total volume of sales only reached 1.7 million tons, which is about half the amount sold during the last two seasons. On August 31, 2015, the government cotton reserves stood at just over 11 million tons.

In 2014/15, China imported 1.8 million tons of cotton, down from 3.1 million tons in 2013/14. The Chinese government limited its 2015 import quota to the volume required under its commitments to the WTO in order to encourage consumption of domestic cotton. Despite the fall in domestic cotton prices, cotton consumption decreased by 1% in 2014/15 to under 7.5 million tons. Lower production costs in nearby countries and duty-free access made cotton yarn imports more attractive than purchases of domestic yarn.

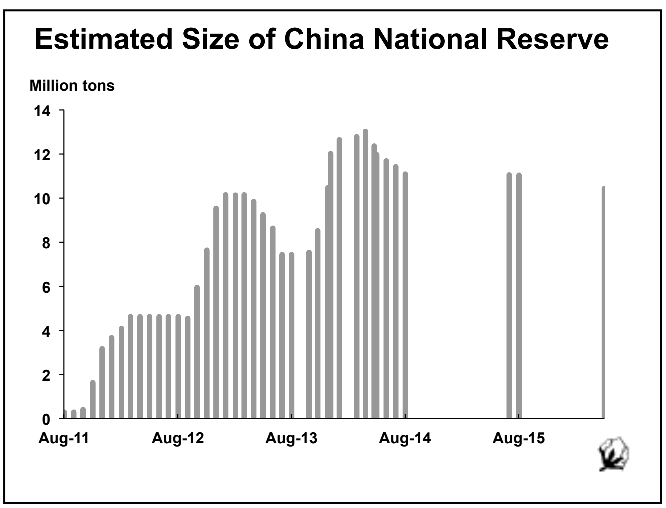
In an effort to reduce domestic cotton supply, the Chinese government lowered the target price to 19,100 yuan/ton in 2015/16 and 18,600 yuan/ton in 2016/17. The area under cotton decreased by 20% to 3.5 million hectares in 2015/16 as cotton prices fell against competing crop prices. In 2016/17, cotton area is projected to decline by 10% to 3.1 million tons, which is the lowest in decades. In addition, the Chinese government has continued to limit cotton imports to the volume required under its commitments to the WTO. As a result, imports in 2015/16 are projected to fall by 40% to 1.1 million tons and imports in 2016/17 are forecast to further decrease by 12% to 960,000 tons. Most imports are purchased from countries with high quality cotton, since the quality of





China's domestic crop deteriorated under the stock-building policy. Mill use is expected to drop 5% to 7.1 million tons in 2015/16 and by 5% to 6.7 million tons in 2016/17. While domestic cotton prices have fallen, averaging around 85 cents/lb in 2015/16, polyester prices in China have averaged around 45 cents/lb, making it much more competitive than cotton.

Sales from the reserve began on May 3, 2016, with both imported and domestic cotton being offered. Around 30,000 tons were put on auction daily throughout May, nearly all of which was sold. By the end of May, around 580,000 tons had been sold from the National Reserve, including 284,000 tons of imported cotton and 304,000 tons of domestic cotton. However, the pace of sales slackened in the last few days of May and into early June. Furthermore, the daily volume of cotton offered during June has been closer to 25,000 tons.



Assuming that the slower pace continues through August, total sales are likely to be close to 1.5 million tons. This would bring the total volume of cotton in the National Reserve to 9.5 million tons at the end of August 2016. At this rate, several years will be necessary for China's reserves to be reduced to a more manageable level.

Conclusion

The Chinese government has for many years played an active role in its cotton sector, from influencing domestic cotton prices to controlling the flow of cotton trade. This has had significant effect on both growers and its textile mills. In recent seasons, its cotton policy has greatly increased domestic cotton prices, which has benefited farmers, particularly in Xinjiang. However, the high prices have made its cotton spinning mills less competitive, leading cotton spinners to relocate their activities in lower cost countries. Beyond the effect on its domestic production and consumption, China's policy of building-up stocks has kept international prices high, due to the strong demand for imports while much of its own production was put into the reserve. In addition, the high prices resulting from Chinese policy have played an important role in dampening the demand for cotton in recent years. China's influence on international prices was also felt when it ended its stockpiling policy and caused imports to decline significantly. Given the large volume of stocks as well as its role as the largest consumer and second largest producer of cotton, China will continue to exert a major influence on the international cotton market in the near and medium term.

Resources

Fang, Cheng and Babcock, Bruce A., "China's Cotton Policy and the Impact of China's WTO Accession and Bt Cotton Adoption on the Chinese and U.S. Cotton Sectors" (2003). CARD Working Papers. Paper 340. http://lib.dr.iastate.edu/card_workingpapers/340.

International Cotton Advisory Committee. *Review of the World Cotton Situation*, various issues.

International Cotton Advisory Committee. *Production and Trade Policies Affecting the Cotton Industry*, various issues.

U.S. Department of Agriculture, Economic Research Service. 2015. *Cotton Policy in China*. http://www.ers.usda.gov/media/1813054/cws-15c-01.pdf.

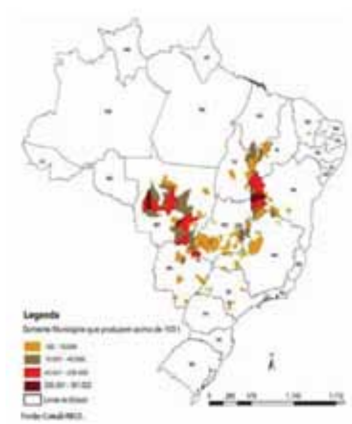
U.S. Department of Agriculture, Economic Research Service. 2015. *Cotton and Wool Yearbook*: November 1998. http://usda.mannlib.cornell.edu/usda/ers/CWS-yearbook//1990s/1998/CWS-yearbook-12-04-1998.asc.

AN OVERVIEW OF THE BRAZILIAN COTTON PRODUCING SECTOR

By Nicolas Rubio, U.S. Agricultural Attaché

Brazil, one of the world's most important cotton producers, has gone through various adaptations. Historically, Brazil's cotton production took place in the south and southeast of the country. However, economic reforms, trade liberalization, and the agricultural expansion in the Center-West of Brazil led farmers to seek new land to implement modern technologies and farming practices, further expanding the sector both geographically and economically.

Cotton Planted Area in Brazil for 2015/16



Evolution of the Cotton Sector

During the 1990s, cotton production was concentrated mainly in the states of Sao Paulo and Parana, where production was more traditional, labor intensive, manually harvested and occupied small areas, resulting in much lower yields.

However, with the opening of the new agricultural frontier, supported by research from the Brazilian Agricultural Research Corporation (Embrapa), the sector looked for new regions in the Center-West of the country. This movement inwards was part of the agricultural expansion seen in Brazil over the last 30 years that has provided cheaper land options to farmers. To produce in the Cerrados, or Tropical Savannahs, cotton farmers were encouraged to invest in sprawling properties where topography, climate, and soil characteristics are ideal for large-scale, highly mechanized farm operations of about 1,000 hectares or more. Today, Mato Grosso and Western Bahia produce over 85 percent of Brazilian cotton. These two states lie within the Cerrados, which cover over 200 million hectares, or about 23 percent of Brazil's unexploited land where farming will surely continue to expand.

Technology Investments Improving Yields

Investments in technology and the development of new varieties catalyzed rapid growth in the productivity of cotton since the late 1990s, making Brazil one of the world's largest producers. Today, Brazilian farmers are continuing to invest in the latest farming technology. The adoption rate of Genetically Engineered (GE) cotton, beginning in 2004, is currently at about 70 percent and today 12 events are approved.

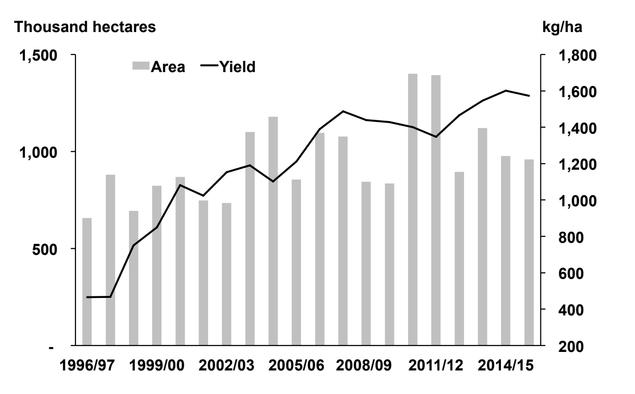
As a result of these technological advances and adaptations, the cotton sector is extremely entrepreneurial, capital intensive, and favors economies of scale in large areas, with mechanized harvesting, and now with one of the highest yields in the world.

Current Situation in the Sector

It is important to highlight the volatile economic environment Brazilian farmers have been facing for the last two years as a result of the political crisis. At the time of writing, the Brazilian President is facing impeachment due to perceived election irregularities. Due to this difficult political environment, the Brazilian real depreciated over 40 percent in 2015. The depreciation of the real resulted in significant gains for Brazilians farmers, since they were able to buy inputs using a stronger real in the first half of 2015; moreover, since cotton is priced in U.S. dollars in the international market, the weaker exchange rate increased domestic cotton prices. This exchange rate situation cushioned the overall decrease in global prices.

This economic volatility will continue to be a factor in

Graph 1: Cotton Yields in Brazil (1996-2016)



2016. If the real continues to weaken, domestic prices could increase, potentially translating into additional incentives to increase area. However, if the real gets stronger (and global cotton prices stay at current levels), Brazilian farmers could face lower domestic prices for the 2016/17 growing season. According to the Brazilian Central Bank, the average exchange rate in 2015 was R$3.34 per U.S. dollar. For 2016 and 2017, the Central Bank's forecast for the value of the real is 3.99 and 4.17 per U.S. dollar, respectively.

Famers are also expecting less support from the Brazilian Government (GOB). Every year, the Ministry of Agriculture, Livestock, and Food Supply (MAPA) announces its "Plano Safra", a program that offers credit to cover production costs. However, availability of subsidized loans under this program are expected to be lower compared to last year due to the difficult economic situation the country is expected to face in 2016 and possibly into 2017. A portion of the program offers low interest (subsidized) production loans. The lower amount of loans is expected to contribute to the higher cost of production forecasted for the next growing season.

Outlook

Despite the current economic challenges in Brazil, investments in land technology and the development of new varieties are expected to continue in the longer term. Between the 1999/00 and 2014/15 seasons, productivity increased from 0.85 to about 1.55 tons per hectare. As a result, the Ministry of Agriculture, Livestock, and Food Supply (MAPA) forecasts that planted area with cotton in Brazil will remain relatively steady between now and 2024/25. However, productivity can still improve and MAPA forecasts yields and production to continue to increase along the same timeline.

Challenges Ahead

The sector is also facing difficult challenges, particularly the high cost of production to combat pests and Brazil's infrastructure. At the opening of its annual conference in 2015, the president of the Brazilian Cotton Producers Association (Abrapa), launched a national campaign against the boll weevil. According to their estimates, cotton farmers spend over 40 percent of the cost of production dealing with this issue.

This campaign was fully implemented at the beginning of the 2015/16 planting season and the main focus was to alert farmers about the risks and the importance of properly combating the boll weevil. Through extensive advertising materials, which have been distributed by the ten state associations linked to Abrapa, the effort to combat this pest is well underway. At the same time, Abrapa has been in conversations with various research institutions to engage in research collaboration to deal with this pest in Brazil.

Congested roads, the need for road improvements, and high freight costs are other key challenges that will continue to affect the sector. The average distance to ports is over 800 miles, and port costs are often high due to infrastructural inefficiencies and generally high costs of doing business in Brazil. Infrastructure development has severely lagged behind the expansion of agricultural output, as most transportation from main producing regions is by truck. Deficient infrastructure will continue to be a serious challenge for Brazil.

Nonetheless, Brazilian cotton farmers will continue to adapt and maintain their position as a key player in the global cotton market despite challenges. As shown in the last two decades, their ability to adapt to market conditions, global trends, and domestic challenges make Brazil a true competitive global player.

Projections for planted area, yield, and production – Brazil (2014/15 to 2024/25 harvest years)

Harvest year	Planted Area (1000 ha)	Yield (t/ha)	Production (1000 t)
2014/15	977	1.54	1,509
2015/16	885	1.69	1,496
2016/17	1068	1.67	1,788
2017/18	1040	1.73	1,794
2018/19	940	1.83	1,719
2019/20	997	1.87	1,862
2020/21	1045	1.89	1,976
2021/22	991	1.97	1,955
2022/23	983	2.04	2,006
2023/24	1025	2.07	2,119
2024/25	1016	2.13	2,160

Source: MAPA

THE COTTON SECTOR OF CHAD

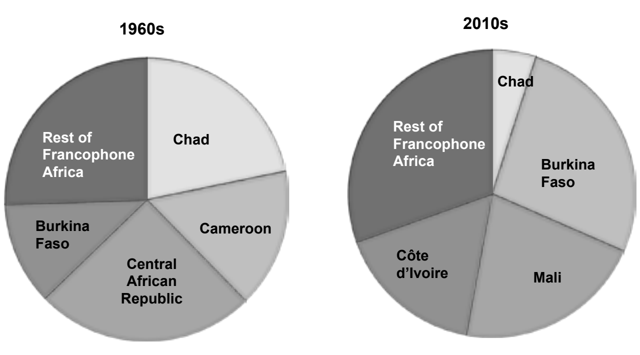
This is a summary of the paper "La Filiere Cotoniniere du Tchad: Historiques, Evolution et Perspectives"[1] provided to participants of the 14th Meeting of the African Cotton Association (ACA)

Cotton has been grown in Chad since the colonial period. The French textile industry was dependent on imports of cotton for raw material and supported the establishment of cotton companies to develop cotton production in France's African colonies, including Chad. After independence, the government of Chad has been involved in the country's cotton sector. Currently, more than 25% of the population of Chad is engaged in cotton production. In the production zones, cotton cultivation impacts the daily life of more than 380,000 growers grouped into 5,000 Village Associations (Associations Villageoises) and more than 3 million people who, directly or indirectly, receive income from cotton production. This paper examines the history of cotton in Chad from the colonial period to the present and the organizations involved in the country's cotton sector.

Position of Chad in Francophone Africa

In the 1960s, Chad's production of around 98,000 tons of seedcotton made Chad the largest cotton producer in francophone Africa, accounting for 50% of total production in the franc zone. Chad became the fourth largest producer in 1991/92 and the sixth largest in 1993/94. Its share of production in the region ranged from 10.9% in 1994/95 to 7% in 2001/02, with a peak of 11% in 1997/98, when seedcotton production reached 263,000 tons. In recent seasons, Chad has been among the smaller producers in Africa, since its yield is one of the lowest. This is easily observed by comparing Chad's share of cotton area among francophone African producers with its much lower share of production.

Chad's Share of Francophone Africa's Production



Economic Agents in the Cotton Sector of Chad

The main participants in Chad's cotton sector are the cotton farmers and their associations, Cotontchad SN (formerly Cotontchad), the national government and its specialized institutions, as well as support services.

COTONTCHAD SN-Cotton Company of Chad-New Company

Cotontchad SN has the following responsibilities:

1) provision of agricultural inputs (fertilizers, phytosanitary products, seeds) to cotton growers, primarily on credit;
2) mandatory purchase of each season's entire seedcotton crop;
3) transportation of seedcotton, which is partially handled by private transportation companies;
4) ginning of seedcotton and marketing of cotton lint; and
5) transportation, transformation and marketing of cotton seed into oil.

It also works with the National Office of Rural Development (ONDR) concerning the management of cotton producers and the financing of signed agreements between Cotontchad and other economic agents.

Cotton Producers

The main role of producers is individual production of seedcotton and delivery of the product to Cotontchad SN through their Village Associations (AVs) in accordance with the Charter of the Self-managed Market (MAG-Marché Autogéré). The AVs are the direct guarantors of the activities of Cotonchad SN, such as the provision of agricultural inputs to producers on credit and marketing of seedcotton. The AVs are grouped within cantonal delegations as local coordination committees (CCLs). In turn, the CCLs are grouped into a national organization, the National Union of Cotton Producers in Chad (UNCPT). Each season, UNCPT and Cotontchad SN meet with the government to set prices for seedcotton and inputs. UNCPCT also participates in the marketing of seedcotton in accordance with the revised MAG charter and in all activities involving the participation of farmers.

1) Prepared by COTONTCHAD SN and the Ministry of Agriculture of Chad on February 22, 2016 and presented by Fauba Padacke, director of Cotton Production, COTONTCHAD SN. http://www.africotton.org/aca/fr/IMG/pdf/a.c.a-2016-presentation_cotontchad-fauba.pdf.

ONDR-National Office of Rural Development

ONDR is tasked with the management of the rural sector as a whole for all agricultural production, including cotton. It is a member of the litigation commission charged with classifying seedcotton quality in gins. The partnership between ONDR and COTONTCHAD SN is governed by an agreement of collaboration and a protocol of agreement, the most recent of which were signed by the two parties on May 3rd and 13th 2015.

ITRAD-National Agricultural Research Institute for Development

ITRAD is a national scientific and technical research institute charged with researching cotton varieties, researching production practices, conserving germplasm resources and developing farming technology packages. The partnership between ITRAD and Cotontchad SN formalizes the provision of services by ITRAD and brings technical expertise. These services comprise the establishment of a sowing plan for the season, the production of seeds for sowing in order to maintain purity of varieties, and the training of Cotontchad SN agents in best production practices.

The sections below further discuss the creation and evolution of the actors' roles from the colonial period to the present time.

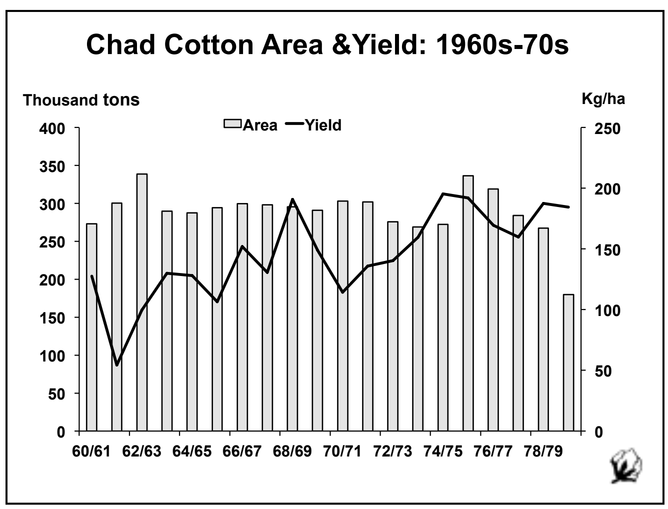
Colonial Period

Starting in 1928, when industrial cotton production practices were introduced in Chad, the French colonial administration gave the Congolese Cotton Company, which was established in 1926, a monopoly contract on the cultivation and marketing of cotton grown in Chad. Six years later, four cotton companies were formed in equatorial French Africa (AEF),[2] including the Equatorial French Cotton Company (Cotonfran), which covered cotton production in Chad as well as in four northern subdivisions of the current Central African Republic. Cotonfran was given a buying monopoly, subject to an agreement to purchase at least 80% of the harvest. The colonial administration encouraged cotton production and each year set a fixed price for the purchase of cotton. The price was based on the expenses of Cotonfran, as well as on changes in global cotton lint prices. The colonial administration put in place a system of technical support to increase irrigation and cotton research in order to further develop cotton production and facilitate taxation. In 1949, the colonial administration established the French Company for the Development of Textiles (CFDT), which was a public-private partnership in charge of promoting cotton farming. CFDT developed practices for increasing cotton production, such as using draught animals in the production process.

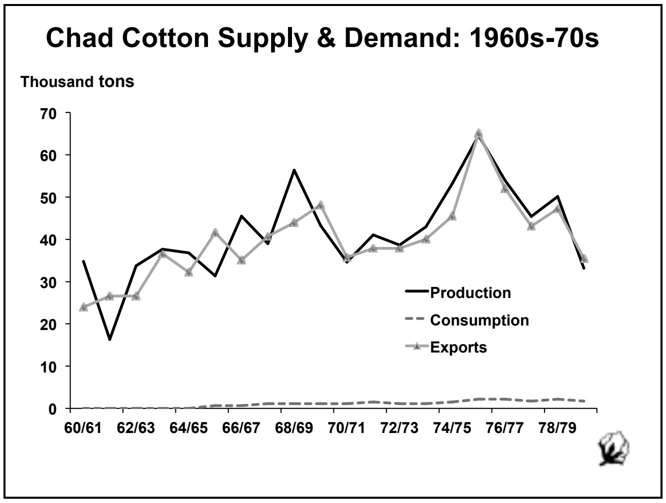
Period of Independence

Starting in 1960, when Chad gained independence, a 10-year agreement was negotiated between Cotonfran, renamed the "French-Chadian Cotton Company", and the new state of Chad. This agreement gave the state of Chad a 20% share in the capital of Cotonfran. However, the development scheme of the cotton sector did not change greatly under the new partnership, as it remained characterized by significant government involvement with the governance changing to the leaders of the newly independent nation rather than the colonial leaders.

One of the changes that did occur was in the production support system, which saw a gradual increase in supervisory staff. In 1960, each specialized agriculture agent was responsible for 625 growers. The number of growers during this period was 500,000, on around 300,000 hectares, so there was a total of 800 agents. Another change came in 1964 with a productivity program through which the government made a concentrated effort to increase production by increasing the use of subsidized inputs (fertilizer, insecticides, and treatment tools). These subsidies were provided to those farmers who were ready to adopt more intensive agriculture, with yield increasing significantly from 188 kg/ha in 1960/61 to 314 kg/ha in 1969/70**.** In 1965, the ONDR was created within the Ministry of Agriculture and Rural Development, with the responsibility of improving the management techniques of growers, disseminating animal traction, and providing inputs to producers. In 1966, Bebedja was the sole research station in Chad. In the same year the textile company of Chad (STT) was created to absorb part of the local cotton production. In 1968, a cotton price stabilization fund (CSPC) was established under the Ministry of Finance to guarantee and stabilize cotton prices paid to farmers by financing all production debts of the



2) Equatorial French Africa comprised Chad, Oubangi-Chari (currently Central African Republic), French Congo (currently The Republic of Congo), Gabon, French Cameroon (the majority of current Cameroon), and São Tomé and Principe.



cotton company. SCPC also contributed to the promotion and development of cotton by financing inputs as well as the subsidization of the inputs.

National Cotton Company Era

The end of the 10-year agreement between Chad and Cotonfran coincided with the refusal of Cotonfran to increase the seedcotton price to producers by 1 CFA/kg. As a result, Chad repurchased the shares of Cotonfran and created the Cotton Company of Chad (Cotontchad) on October 29, 1971. The new entity started a capital of 600 million CFA francs, with shares held by the state of Chad (75%), CFDT (17%), the French Development Agency (AFD) (2%), and banks (6%). In 1983, 3.8 billion CFA francs were added and 4.256 billion was added at a later stage. Cotontchad's responsibilities were to purchase all seedcotton production, to transport and gin seedcotton, and to sell the fiber. Two years after its creation, Cotontchad signed a service agreement with CFDT. Cotontchad also signed an agreement with the government of Chad that gave it exclusive rights to cotton cultivation and marketing operations, as well as authorizing its participation in all rural development operations. Cotontchad launched a vast program of investment into modernizing 22 gins, the majority of which used saw ginning. Investments were also made into updating the fleet of trucks used to transport seedcotton to gins and lint to ports. On March 29, 1975, Cotontchad signed another agreement with the government of Chad that gave it the exclusive right to process cotton and peanut seeds into food oils, soaps and other by-products. An oil and soaps factory was set up in 1978 at Moundou to replace Cotonfran's Oilseed Company of Logone, Chad.

Cotontchad's Cotton Crises

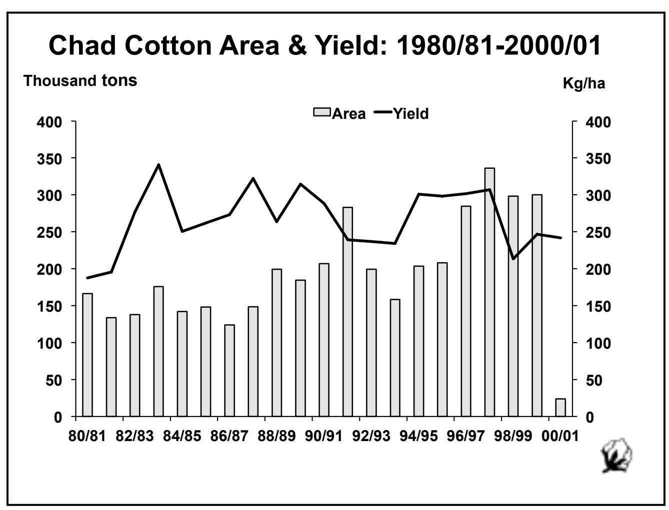
1984/1985 Crisis

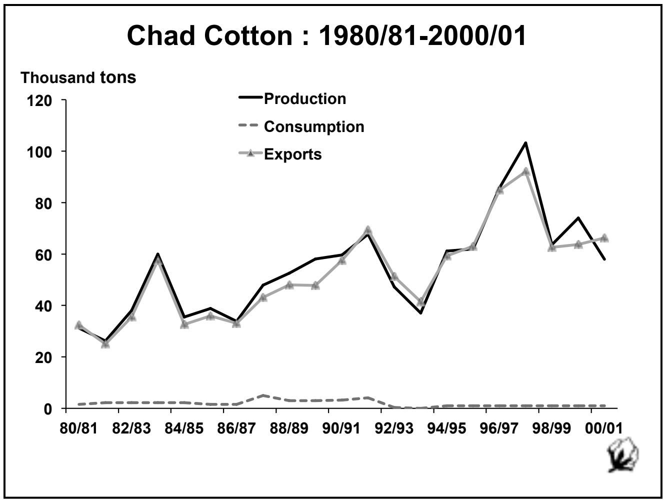
In 1984/85, world cotton prices fell by 21% to 69 cents/lb, which induced drastic measures in order to save Chad's cotton sector. These measures included reducing ginning costs and setting new industry standards. These standards included: closing seven gins in addition to the five that had previously been closed due to political-military troubles; laying off a large number of staff; freezing salary increases; and selling off the fleet of trucks. A three-year plan, called "Contract plan I" was put in place from 1988/89 to 1990/91 to consolidate these measures. This was followed by a second three-year plan, the "Contract plan II", put in place from 1991/92 to 1993/94 to restore the competitiveness of the cotton sector by means of an agreement concluded between the Cotton and Textile Research Institute (IRCT), ONDR, the teaching and agricultural professional training directorate (DEFPA), the Rural Intervention Fund (IFR), and Cotontchad. One of the outcomes of the agreement was that ONDR ceased its involvement with the provision of cotton production inputs in order to concentrate solely on advisory services. Thus, ONDR's personnel decreased from 985 agents in 1983 to 541 in 1986 and 360 by 1990. This was also when IRCT was effectively replaced by the French Agricultural Research Centre for International Development (CIRAD).

1992/1993 Crisis

The fall of world cotton prices by 8% to 58 cents/lb, after a season in which prices had fallen by 24% to 63 cents/lb, plunged Cotontchad into another crisis that led to the suppression of the highway patrol and the sale of the truck fleet, since the maintenance of rural roads and transportation were not an integral part of Cotontchad's operations. A pact was signed between the government of Chad, the majority shareholder in Cotontchad, and CFDT that was a management contract for Cotontchad. The contract entrusted the CFDT with ensuring the recovery of Cotontchad (through managing costs and putting in place rigorous management procedures) and of the cotton sector by improving services to growers (through timely payments for seedcotton and provision of inputs). As an incentive to increase the production, transportation and ginning of cotton, investments were made in new gins and transportation equipment.

These factors were reinforced by the increase in cotton trade stimulated by the devaluation of the CFA franc in 1994 and





the introduction of a new service called "Interface", which was composed of 120 agents responsible for assuring the distribution of agricultural inputs and the management of seedcotton marketing. This service offset the loss of ONDR agents, the number of which decreased to 310 in 1994 and 207 in 1996. In 1996, the Project of Agricultural and Pastoral Services (PSAP) was initiated, which favored the professionalization of ONDR personnel in terms of agricultural advice. As a result, Chad's cotton production increased from 97,000 tons of seedcotton in 1993/94 to 263,000 tons in 1997/98.

1999/2000 Crisis

While Chad's cotton production expanded, international cotton prices had been falling. By 1999/00, world cotton prices had decreased from 92 cents/lb in 1994/95 to 53 cents/lb in 1999/00. As a result Chad's cotton sector once again became vulnerable. Other factors that threatened the sustainability of the sector included: 1) suboptimal technical and financial administration by Cotontchad; 2) low yields caused by producers' inability to access agricultural inputs, a lack of farm equipment and the low adoption rate of effective agricultural practices by many farmers; 3) lower returns to producers, mainly due to low prices, weak yields and high input costs; and 4) geographical isolation and inadequate infrastructure that significantly increased transportation costs.

The government of Chad focused on a strategy of reforms for the cotton sector with the goal of promoting a sustainable increase in income for cotton farmers and ending poverty. This plan included both short- and long-term steps. The first step was for Cotontchad to reduce losses from the 1999/00 crop by lowering the price paid to producers from 170 CFA francs/kg to 150 CFA francs/kg. However, the fall in prices discouraged farmers from planting in 2000/01. As a result, cotton area decreased by 20% to 240,000 hectares and production by 22% to 58,000 tons. This loss in production and foreign earnings from cotton lint sales worsened Cotontchad's financial position, so that its assets were significantly inferior to its debts. In order to improve the situation, Cotontchad underwent an audit and negotiated lower rates with its partners and creditors.

In addition to reducing losses from the 1999/00 crop, several steps were taken to restructure the role of farmers in the cotton sector and to improve production practices. In 1986, noting the plethora of producer associations, ONDR decided to create Village Associations (AV) based on producer groups. ONDR mandated AVs in all villages in the cotton zone by the end of 1992. The goal was to transfer some of the responsibilities of ONDR to producers through their AVs. The following responsibilities were transferred to the AVs: 1) inventory of agricultural input needs; 2) receipt of inputs and distribution to farmers; 3) marketing of seedcotton through a self-managed cotton market (MAG); and 4) collection of revenues from cotton and making payment to farmers. In 1992, the AVs were reorganized under the Ministry of Agriculture into the Peasant Movement of the Sudanian Zone (MPZS), which was a federation of AVs at the national level and partnered with Cotontchad. It was paid on the basis of 300 CFA francs per ton of lint traded from fees levied on payments to AVs. However, MPZS did not account for its activities or the usage of its resources to its members. Moreover, it was dominated by traditional leaders, since new leaders had not been elected into the organization, making any needed changes difficult.

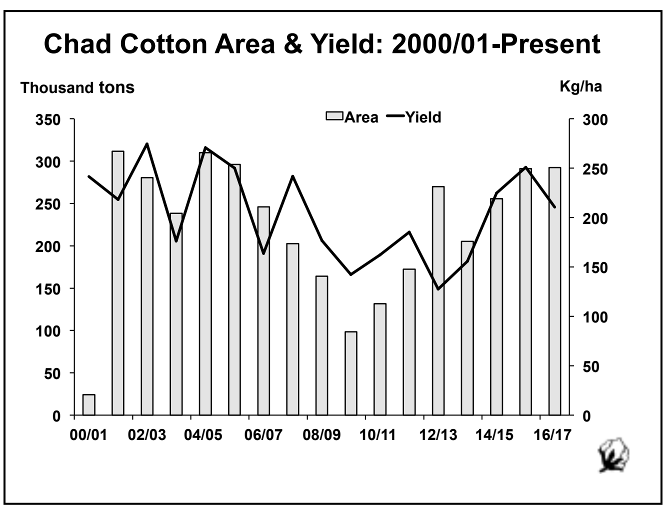
In 2000, as part of the measures arising from the 1999/00 crisis, a restructuring of producer groups was once again undertaken by means of the creation of CCLs. This started with producer awareness campaigns following the democratic elections of village delegates and cantonal delegates earlier in the year. Based on cantonal delegates as ex officio members, the CCLs were set up by elections around each ginnery zone in April and May 2000. The Social Development Fund of Japan financed a capacity-building program that year, which consisted of diffusion of information, organization, formation and evaluation. The CCLs, which numbered 10, joined together under a national organization called the National Union of Cotton Producers of Chad (UNPCT) on April 2, 2007. UNPCT participated in meetings each season to determine fixed prices for seedcotton and inputs, to take inventory of input supplies and to prepare for seedcotton sales.

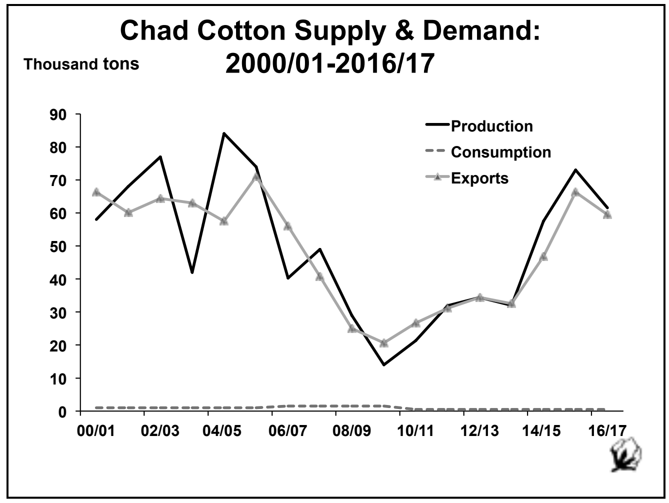
The third step to aid the cotton sector in the wake of the 1999/00 crisis was a series of political and institutional measures, including the divestiture of Cotontchad from the government. One step was to separate the oil and soaps factory from management by Cotontchad through privatization. However, in light of dysfunctions in the private sector, the oil and soaps factory was reintegrated into Cotontchad in August 2005. Another step was to institute a partnership between Cotontchad and cotton producers with a mandate to set producer prices for seedcotton and inputs. In addition, a joint committee was established to set seedcotton prices based on a price-setting mechanism and the price of inputs.

While the process to sell off the government's shares of Cotontchad's was underway, the persistent crisis in the cotton sector necessitated a meeting for the revival of production in 2004. In April 2004, the government decided to organize a working group directed by the Prime Minister to find a way to save the threatened 2004/05 season and, above all, to revive cotton production in Chad. This workshop included participation by all stakeholders in the cotton sector. The state of Chad was loaned 4.8 billion CFA francs at the end of 2005 to finance part of the investments that arose from the workshop. However, the loan was insufficient to meet all the needs of Cotontchad, which continued to suffer from the bad state of rural roads since the closure of the highway patrol in 1992, the insufficiency of its own fleet for the collection of seedcotton, the dilapidation of industrial tools, and the incapacity of inputs furnished on credit to producers to improve yields and increase production.

Restructuring of Cotontchad and creation of Cotontchad SN

The successive crises in the 1980s and 1990s led the government to restructure Cotontchad, a process that was concluded successfully in January 2012 with the creation of a new company called the Cotton Company of Chad-New Company (Cotontchad SN) to replace Cotontchad and overtake its activities. Cotontchad was dissolved in June 2012. In 2012/13, the cotton area in Chad expanded by 57% to 270,000 hectares. However, weak yields that season limited production, which increased by 8% to 34,000 tons. After falling in 2013/14, cotton area and production has increased in the last two seasons, with area reaching 291,000 hectares and production 73,000 tons in 2015/16. The annual cash income for producers consisting of revenue from the sale of seedcotton has improved, year after year, from 3 billion CFA francs during the first year of operation of Cotontchad in





1971/72 to 50 billion CFA francs when seedcotton production reached a record of 263,000 tons in 1997/98. Since this peak, income from cotton has declined continuously, reaching a low of 6.7 billion CFA francs in 2009/10, a fall of 87% over 12 seasons. With the gradual recovery of production and an increased seedcotton purchase price from 2010/11 onwards, the income of cotton producers has increased, reaching about 43 billion CFA francs in 2015 /16.

In 2015, the Support Plan for the Cotton Textile Sector (PAFICOT) of the Ministry of Agriculture, financed by the African Development Bank, began reorganizing the CCLs into cooperatives due to an intervention by the Association for the Development of Community Actions in Chad. The association set up a network of five levels of producer groups: cooperatives at the village level; cooperatives at cantonal level; cooperatives at the ginnery zone level replacing the CCLs; unions of cooperatives at the sub-regional level (with headquarters at Pala, Moundou and Sarh); and, lastly, the federation of cooperative unions at the national level with its seat at Moundou in place of the UNPCT. These structures currently exist in the eastern and central cotton-producing zones.

Conclusion

Cotton has had a long history in Chad, reaching back to colonial times when it was a source of raw material for France's textile industry. Since independence, the government of Chad also has a long history of involvement in the cotton sector, along with a series of other stakeholders that have been discussed above. Despite the many ups and downs of the sector, cotton continues to play a vital role in Chad's economy and recent endeavors by these stakeholders show a potential for revival in cotton production.

2015/16 SUPPLY AND USE OF COTTON BY COUNTRY June 1, 2016

	AREA	YIELD	PROD	BEG STKS	IMPORTS	CONS	EXPORTS	END STKS	S/U *	S/MU **
	000 Ha	Kgs/Ha	000 Metric Tons						Ratio	Ratio
CANADA				0	1	1		0	0.11	0.11
CUBA	4	272	1	1	2	3		1	0.19	0.19
DOM. REP.					1	1		0	0.47	0.47
MEXICO	130	1,449	188	209	219	409	20	187	0.44	0.46
USA	3,268	859	2,806	980	9	784	2,003	1,007	0.36	1.29
N. America	**3,407**	**880**	**2,997**	**1,190**	**232**	**1,199**	**2,023**	**1,196**	**0.37**	**1.00**
EL SALVADOR				10	30	30		10	0.32	0.32
GUATEMALA				8	25	25		8	0.32	0.32
HONDURAS	0	319	0	0		0		0		
C. America	**2**	**513**	**1**	**18**	**55**	**56**	**0**	**18**	**0.32**	**0.32**
ARGENTINA	406	469	190	306	1	144	47	306	1.60	2.12
BOLIVIA	4	625	3	2	1	3		2	0.70	0.70
BRAZIL	960	1,500	1,441	1,158	4	757	1,005	841	0.48	1.11
CHILE				0	0	0		0	0.15	0.15
COLOMBIA	29	849	25	23	23	55	1	15	0.26	0.26
ECUADOR	1	440	1	1	13	13		1	0.10	0.10
PARAGUAY	13	444	6	2	0	2	6	1	0.10	0.40
PERU	27	673	18	15	65	82	1	15	0.18	0.19
URUGUAY				0		0		0	0.58	0.58
VENEZUELA	15	406	6	5	6	11		6	0.55	0.55
S. America	**1,455**	**1,161**	**1,689**	**1,514**	**114**	**1,069**	**1,060**	**1,188**	**0.56**	**1.11**
ALGERIA				1	6	6		1	0.13	0.13
EGYPT	105	817	85	58	56	113	35	51	0.35	0.46
MOROCCO				5	36	36		5	0.14	0.14
SUDAN	50	516	28	52		9	2	69	6.34	7.77
TUNISIA				3	13	13		3	0.21	0.21
N. Africa	**155**	**734**	**113**	**119**	**110**	**177**	**37**	**129**	**0.60**	**0.73**
BENIN	330	315	104	67		4	115	52	0.44	13.00
BURKINA FASO	663	380	252	157		4	265	140	0.52	34.92
CAMEROON	222	513	114	69		2	113	69	0.60	36.05
CENT. AFR. REP.	35	230	8	3			8	3	0.40	
CHAD	291	251	73	23		1	66	29	0.43	57.40
COTE D'IVOIRE	402	441	177	39		2	152	62	0.40	30.27
GUINEA	12	273	3	1			3	1	0.41	
MADAGASCAR				3				3		
MALI	573	377	216	124		3	218	119	0.54	39.60
NIGER	5	448	2	0		1	1	0	0.11	0.25
SENEGAL	24	351	9	4		1	8	4	0.46	5.09
TOGO	101	297	30	13			28	15	0.53	
F. Africa	**2,659**	**372**	**988**	**503**		**17**	**978**	**497**	**0.50**	**28.90**
ANGOLA	3	302	1	0		1	0	0	0.35	0.48
ETHIOPIA	66	642	42	17	25	51	0	33	0.64	0.65
GHANA	16	366	6	2	1	1	6	2	0.25	1.31
KENYA	21	184	4	2		4		1	0.24	0.24
MALAWI	150	230	35	24		3	35	21	0.54	6.84
MOZAMBIQUE	110	222	20	16			24	12	0.50	
NIGERIA	253	205	52	26	1	19	37	22	0.39	1.14
SOUTH AFRICA	8	1,234	10	18	17	22	10	13	0.39	0.56
TANZANIA	315	217	68	120		34	54	100	1.14	2.93
UGANDA	61	284	17	21		1	22	16	0.74	31.64
CONGO, DR				2	8	8		2	0.27	0.27
ZAMBIA	298	143	43	64		2	40	65	1.58	
ZIMBABWE	207	119	25	24		4	31	13	0.38	3.55
S. Africa	**1,530**	**213**	**326**	**340**	**73**	**173**	**259**	**306**	**0.71**	**1.76**
KAZAKHSTAN	103	436	45	17	0	11	43	8	0.15	0.69
KYRGYZSTAN	14	810	12	6	4	1	16	4	0.23	4.19
TAJIKISTAN	154	533	82	30		9	75	27	0.32	2.88
TURKMENISTAN	534	515	300	39		152	120	66	0.24	0.44
UZBEKISTAN	1,298	624	810	264	1	338	544	193	0.22	0.57
C. Asia	**2,103**	**594**	**1,248**	**357**	**5**	**512**	**799**	**299**	**1.16**	**0.58**

2015/16 SUPPLY & USE OF COTTON BY COUNTRY (cont'd) June 1, 2016

	AREA	YIELD	PROD	BEG STKS	IMPORTS	CONS	EXPORTS	END STKS	S/U *	S/MU **
	000 Ha	Kgs/Ha	000 Metric Tons						Ratio	Ratio
AUSTRIA				0	6	5	0	1	0.15	0.17
AZERBAIJAN	19	656	12	6		15		3	0.20	0.20
BELARUS				4	11	11		4	0.34	0.34
BELGIUM				2	12	5	8	1	0.11	0.26
BULGARIA	0	324	0	1	5	5	0	1	0.11	0.12
CZECH REP.				0	4	3	0	1	0.54	0.54
DENMARK					0	0				
ESTONIA										
FINLAND										
FRANCE				3	16	13	3	3	0.16	0.19
GERMANY				11	53	48	5	11	0.20	0.22
GREECE	260	838	218	52	3	19	202	52	0.24	2.75
HUNGARY				0	0	0	0	0	0.17	0.30
IRELAND				0	0	0		0	0.08	0.08
ITALY				8	50	48	4	6	0.11	0.12
LATVIA				0	0	0		0	0.17	0.17
LITHUANIA				0	0		0	0		
MOLDOVA				1	2	2		1	0.34	0.34
NETHERLANDS				0	4	4		0	0.10	
NORWAY										
POLAND				2	7	7		2	0.26	0.26
PORTUGAL				10	29	32		6	0.20	0.20
ROMANIA				0	0	0		0	0.08	0.08
RUSSIA	1	521	1	18	52	52	1	17	0.32	0.33
SLOVAK REP.										
SPAIN	66	847	56	20	3	5	54	20	0.34	3.77
SWEDEN				0	0	0		0		
SWITZERLAND				0	4	4	0	0	0.08	0.08
UKRAINE				0	2	2		0	0.23	0.23
UNITED KINGDOM				0	0	0		0	0.20	0.20
FORMER YUGOSLAVIA				1	7	7		1	0.20	0.20
Europe	**348**	**826**	**287**	**141**	**274**	**293**	**278**	**132**	**0.23**	**0.45**
Including EU-28	**326**	**840**	**274**	**110**	**195**	**198**	**277**	**104**	**0.22**	**0.53**
CHINA	3,470	1,489	5,166	12,876	1,083	7,084	31	12,010	1.69	1.70
TAIWAN				49	165	165		49	0.30	0.30
HONG KONG				33	2		1	34	65.68	
Sub total	**3,470**	**1,489**	**5,166**	**12,958**	**1,249**	**7,248**	**31**	**12,093**	**1.66**	**1.67**
AUSTRALIA	270	2,022	546	170	0	7	531	177	0.33	25.21
INDONESIA	8	603	5	107	660	654		118	0.18	0.18
JAPAN				16	69	67		17	0.25	0.25
KOREA, D.R.				1	5	5		1	0.24	0.24
KOREA, REP.				68	272	281		60	0.21	0.21
MALAYSIA				25	101	79	12	35	0.39	0.44
PHILIPPINES	0	569	0	3	13	13		3	0.24	0.24
SINGAPORE				0	9		9	0	0.04	
THAILAND	2	518	1	45	286	287		45	0.16	0.16
VIETNAM	1	465	0	113	1,100	1,100		114	0.10	0.10
E. Asia	**300**	**1,865**	**560**	**551**	**2,515**	**2,501**	**551**	**573**	**0.19**	**0.23**
AFGHANISTAN	45	414	19	14		4	14	14	0.74	3.15
BANGLADESH	40	675	27	248	1,079	1,054		300	0.28	0.28
INDIA	11,881	495	5,879	2,317	220	5,225	1,213	1,977	0.31	0.38
MYANMAR	239	653	156	104	51	207		104	0.50	0.50
PAKISTAN	2,869	528	1,514	768	536	2,193	58	566	0.25	0.26
SRI LANKA				0	2	2		0	0.11	0.11
S. Asia	**15,077**	**504**	**7,597**	**3,451**	**1,888**	**8,688**	**1,285**	**2,962**	**0.30**	**0.34**
IRAN	91	720	66	36	66	131		36	0.28	0.28
IRAQ	17	362	6	1	5	10		2	0.21	0.21
ISRAEL	9	1,891	17	1			17	2	0.09	
SYRIA	44	883	39	155		86	5	103	1.13	1.20
TURKEY	434	1,610	699	882	780	1,470	48	842	0.55	0.57
Sub total	**611**	**1,364**	**833**	**1,080**	**860**	**1,713**	**71**	**989**	**0.55**	0.58
WORLD TOTAL	**31,115**	**701**	**21,805**	**22,222**	**7,374**	**23,646**	**7,374**	**20,381**	**0.86**	**0.86**

*/ Ending stocks divided by consumption plus exports.

**/ Ending stocks divided by consumption.

Subtotals and total include countries not shown.

2016/17 SUPPLY AND USE OF COTTON BY COUNTRY June 1, 2016

	AREA	YIELD	PROD	BEG STKS	IMPORTS	CONS	EXPORTS	END STKS	S/U *	S/MU **
	000 Ha	Kgs/Ha	000 Metric Tons						Ratio	Ratio
CANADA	b			0	1	1		0	0.10	0.10
CUBA	4	271	1	1	2	3		1	0.19	0.19
DOM. REP.					1	1		0	0.47	0.47
MEXICO	133	1,563	207	187	219	417	20	176	0.40	0.42
USA	3,399	921	3,129	1,007	4	784	2,230	1,127	0.37	1.44
N. America	**3,540**	**943**	**3,338**	**1,196**	**228**	**1,207**	**2,250**	**1,305**	**0.38**	**1.08**
EL SALVADOR				10	31	31		10	0.32	0.32
GUATEMALA				8	25	25		8	0.32	0.32
HONDURAS	0	318	0	0		0		0		
C. America	**2**	**512**	**1**	**18**	**55**	**56**	**0**	**18**	**0.32**	**0.32**
ARGENTINA	406	509	206	306	1	141	128	245	0.91	1.73
BOLIVIA	4	639	3	2	0	3	0	2	0.50	0.53
BRAZIL	975	1,528	1,490	841	4	712	829	794	0.52	1.12
CHILE				0	0	0		0	0.15	0.15
COLOMBIA	29	821	24	15	32	55	1	15	0.26	0.26
ECUADOR	1	439	1	1	13	13		1	0.10	0.10
PARAGUAY	12	413	5	1	0	2	2	2	0.34	0.70
PERU	27	795	21	15	60	81	1	15	0.19	0.19
URUGUAY				0		0		0	0.06	0.06
VENEZUELA	15	390	6	6	4	10		5	0.47	0.47
S. America	**1,468**	**1,195**	**1,755**	**1,188**	**116**	**1,019**	**962**	**1,079**	**0.54**	**1.06**
ALGERIA				1	6	6		1	0.13	0.13
EGYPT	105	821	86	51	69	112	43	51	0.33	0.46
MOROCCO				5	36	36		5	0.14	0.14
SUDAN	50	487	24	69		9	16	69	2.82	7.77
TUNISIA				3	12	12		3	0.22	0.22
N. Africa	**155**	**713**	**111**	**129**	**123**	**175**	**59**	**129**	**0.55**	**0.74**
BENIN	337	384	129	52		4	125	52	0.40	12.91
BURKINA FASO	670	416	279	140		4	289	126	0.43	31.45
CAMEROON	224	513	115	69		2	130	52	0.39	27.18
CENT. AFR. REP.	35	231	8	3			8	3	0.40	
CHAD	292	211	62	29		1	59	30	0.50	60.56
COTE D'IVOIRE	398	459	183	62		2	173	69	0.40	33.66
GUINEA	12	276	3	1			3	1	0.40	
MADAGASCAR				3				3		
MALI	602	389	234	119		3	221	129	0.57	42.96
NIGER	5	447	2	0		1	1	0	0.11	0.25
SENEGAL	24	380	9	4		1	9	4	0.39	4.77
TOGO	102	326	33	15			33	15	0.45	
F. Africa	**2,700**	**392**	**1,057**	**497**		**17**	**1,052**	**484**	**0.45**	**28.16**
ANGOLA	3	302	1	0		1	0	0	0.33	0.48
ETHIOPIA	66	423	28	33	25	52	0	33	0.63	0.63
GHANA	16	365	6	2	1	1	6	2	0.25	1.31
KENYA	21	181	4	1	0	4		1	0.17	0.17
MALAWI	151	240	36	21		3	32	22	0.61	7.20
MOZAMBIQUE	110	223	25	12			22	15	0.68	
NIGERIA	253	202	51	22	1	19	39	16	0.28	0.84
SOUTH AFRICA	8	1,208	10	13	18	23	5	13	0.45	0.56
TANZANIA	315	217	68	100		34	57	77	0.84	2.24
UGANDA	61	275	17	16		1	24	9	0.37	17.18
CONGO, DR				2	8	8		2	0.27	0.27
ZAMBIA	298	143	43	65		2	59	47	0.78	
ZIMBABWE	203	199	40	13		4	27	23	0.74	6.08
S. Africa	**1,527**	**218**	**332**	**306**	**74**	**175**	**272**	**264**	**0.59**	**1.51**
KAZAKHSTAN	103	491	50	8	0	11	28	19	0.48	1.64
KYRGYZSTAN	14	810	12	4	4	1	14	4	0.27	4.19
TAJIKISTAN	154	566	87	27		9	78	27	0.31	2.88
TURKMENISTAN	534	535	286	66		155	130	66	0.23	0.43
UZBEKISTAN	1,256	673	845	193	1	341	489	209	0.25	0.61
C. Asia	**2,060**	**621**	**1,280**	**299**	**5**	**518**	**739**	**326**	**1.54**	**0.63**

2016/17 SUPPLY & USE OF COTTON BY COUNTRY (cont'd) June 1, 2016

	AREA	YIELD	PROD	BEG STKS	IMPORTS	CONS	EXPORTS	END STKS	S/U *	S/MU **
	000 Ha	Kgs/Ha	000 Metric Tons						Ratio	Ratio
AUSTRIA				1	5	5		1	0.17	0.17
AZERBAIJAN	28	632	18	3		15		6	0.36	0.36
BELARUS				4	11	11		4	0.34	0.34
BELGIUM				1	13	5	8	1	0.11	0.27
BULGARIA	0	324	0	1	5	5	0	1	0.11	0.11
CZECH REP.				1	3	3	0	1	0.56	0.56
DENMARK					0	0				
ESTONIA										
FINLAND										
FRANCE				3	16	13	3	3	0.16	0.20
GERMANY				11	52	48	5	11	0.20	0.22
GREECE	260	991	258	52	3	19	242	52	0.20	2.81
HUNGARY				0	0	0	0	0	0.18	0.31
IRELAND				0	0	0		0	0.09	0.09
ITALY				6	51	48	3	6	0.11	0.12
LATVIA				0	0	0		0	0.32	0.32
LITHUANIA				0	0		0	0		
MOLDOVA				1	2	2		1	0.34	0.34
NETHERLANDS				0	4	4		0	0.10	
NORWAY										
POLAND				2	7	7		2	0.27	0.27
PORTUGAL				6	33	29		11	0.37	0.37
ROMANIA				0	0	0		0	0.08	0.08
RUSSIA	1	520	1	17	52	52	1	17	0.32	0.32
SLOVAK REP.										
SPAIN	65	891	58	20	3	5	57	19	0.30	3.66
SWEDEN				0	0	0		0		
SWITZERLAND				0	4	4	0	0	0.08	0.08
UKRAINE				0	2	2		0	0.25	0.25
UNITED KINGDOM				0	0	0		0	0.20	0.20
FORMER YUGOSLAVIA				1	7	7		1	0.20	0.20
Europe	**356**	**939**	**335**	**132**	**276**	**287**	**319**	**137**	**0.23**	**0.48**
Including EU-28	**326**	**970**	**316**	**104**	**198**	**192**	**318**	**107**	**0.21**	**0.56**
CHINA	3,123	1,489	4,649	12,010	957	6,729	39	10,848	1.60	1.61
TAIWAN				49	161	161		49	0.30	0.30
HONG KONG				34	1		1	35	44.51	
Sub total	**3,123**	**1,489**	**4,649**	**12,093**	**1,120**	**6,891**	**40**	**10,932**	**1.58**	**1.59**
AUSTRALIA	284	2,259	641	177	0	7	558	254	0.45	37.90
INDONESIA	8	615	5	118	685	677		131	0.19	0.19
JAPAN				17	65	65		16	0.25	0.25
KOREA, D.R.				1	5	5		1	0.24	0.24
KOREA, REP.				60	281	281		60	0.21	0.21
MALAYSIA				35	91	82	12	33	0.35	0.40
PHILIPPINES	0	567	0	3	13	13		3	0.22	0.22
SINGAPORE				0	7		7	0	0.05	
THAILAND	2	517	1	45	290	287		49	0.17	0.17
VIETNAM	1	465	0	114	1,374	1,270		218	0.17	0.17
E. Asia	**313**	**2,092**	**654**	**573**	**2,810**	**2,694**	**576**	**766**	**0.23**	**0.28**
AFGHANISTAN	40	413	17	14		4	13	13	0.74	2.95
BANGLADESH	40	708	28	300	1,131	1,159		300	0.26	0.26
INDIA	12,356	522	6,455	1,977	209	5,434	1,061	2,146	0.33	0.39
MYANMAR	244	634	155	104	10	207		62	0.30	0.30
PAKISTAN	2,941	697	2,049	566	319	2,215	42	677	0.30	0.31
SRI LANKA				0	2	2		0	0.11	0.11
S. Asia	**15,625**	**557**	**8,705**	**2,962**	**1,671**	**9,024**	**1,116**	**3,198**	**0.32**	**0.35**
IRAN	82	666	55	36	77	132		36	0.27	0.27
IRAQ	13	361	5	2	4	9		2	0.21	0.21
ISRAEL	7	1,898	14	2			14	1	0.09	
SYRIA	9	985	9	103		33	1	77	2.24	2.33
TURKEY	443	1,604	710	842	880	1,480	47	906	0.59	0.61
Sub total	**557**	**1,425**	**793**	**989**	**972**	**1,666**	**63**	**1,025**	**0.59**	**0.62**
WORLD TOTAL	**31,426**	**732**	**23,011**	**20,381**	**7,448**	**23,730**	**7,448**	**19,663**	**0.83**	**0.83**

*/ Ending stocks divided by consumption plus exports.

**/ Ending stocks divided by consumption.

Subtotals and total include countries not shown.

ICAC

SUPPLY AND DISTRIBUTION OF COTTON

June 1, 2016

Seasons begin on August 1

	2011/12	2012/13	2013/14 Est.	2014/15 Est.	2015/16 Proj.	2016/17 Proj.
	Million Metric Tons					
BEGINNING STOCKS						
WORLD TOTAL	**10.315**	**15.347**	**18.321**	**20.490**	**22.22**	**20.38**
CHINA	2.087	6.181	9.607	12.088	12.88	12.01
USA	0.566	0.729	0.903	0.651	0.98	1.01
PRODUCTION						
WORLD TOTAL	**27.839**	**26.800**	**26.185**	**26.116**	**21.81**	**23.01**
INDIA	6.239	6.290	6.766	6.460	5.88	6.45
CHINA	7.400	7.300	6.929	6.480	5.17	4.65
USA	3.391	3.770	2.811	3.553	2.81	3.13
PAKISTAN	2.311	2.002	2.076	2.305	1.51	2.05
BRAZIL	1.877	1.310	1.734	1.563	1.44	1.49
UZBEKISTAN	0.880	1.000	0.910	0.885	0.81	0.85
OTHERS	5.741	5.128	4.960	4.870	4.19	4.39
CONSUMPTION						
WORLD TOTAL	**22.784**	**23.531**	**23.762**	**24.333**	**23.65**	**23.73**
CHINA	8.635	8.290	7.517	7.479	7.08	6.73
INDIA	4.231	4.731	5.057	5.360	5.23	5.43
PAKISTAN	2.121	2.216	2.470	2.492	2.19	2.22
EUROPE & TURKEY	1.498	1.564	1.616	1.698	1.68	1.68
VIETNAM	0.410	0.492	0.694	0.903	1.10	1.27
BANGLADESH	0.700	0.765	0.880	0.937	1.05	1.16
USA	0.718	0.762	0.773	0.778	0.78	0.78
BRAZIL	0.897	0.910	0.862	0.797	0.76	0.71
OTHERS	3.574	3.801	3.894	3.888	3.77	3.74
EXPORTS						
WORLD TOTAL	**9.826**	**10.085**	**8.976**	**7.647**	**7.37**	**7.45**
USA	2.526	2.836	2.293	2.449	2.00	2.23
INDIA	2.159	1.685	2.014	0.914	1.21	1.06
CFA ZONE	0.597	0.829	0.973	0.883	0.98	1.05
BRAZIL	1.043	0.938	0.485	0.851	1.01	0.83
UZBEKISTAN	0.550	0.690	0.615	0.550	0.54	0.49
AUSTRALIA	1.010	1.343	1.057	0.520	0.53	0.56
IMPORTS						
WORLD TOTAL	**9.784**	**9.790**	**8.721**	**7.597**	**7.37**	**7.45**
CHINA	5.342	4.426	3.075	1.804	1.08	0.96
VIETNAM	0.379	0.517	0.691	0.941	1.10	1.37
BANGLADESH	0.680	0.631	0.967	0.964	1.08	1.13
INDONESIA	0.540	0.686	0.651	0.728	0.66	0.68
TURKEY	0.519	0.803	0.924	0.800	0.78	0.88
TRADE IMBALANCE 1/	**-0.042**	**-0.295**	**-0.255**	**-0.050**	**0.00**	**0.00**
STOCKS ADJUSTMENT 2/	**0.018**	**0.001**	**0.000**	**0.000**	**0.00**	**0.00**
ENDING STOCKS						
WORLD TOTAL	**15.347**	**18.321**	**20.490**	**22.222**	**20.38**	**19.66**
CHINA	6.181	9.607	12.088	12.876	12.01	10.85
USA	0.729	0.903	0.651	0.980	1.01	1.13
ENDING STOCKS/MILL USE (%)						
WORLD-LESS-CHINA 3/	**65**	**57**	**52**	**55**	**51**	**51**
CHINA 4/	**72**	**116**	**161**	**172**	**170**	**161**
COTLOOK A INDEX 5/	**100**	**88**	**91**	**71**		

1/ The inclusion of linters and waste, changes in weight during transit, differences in reporting periods and measurement error account for differences between world imports and exports.
2/ Difference between calculated stocks and actual; amounts for forward seasons are anticipated.
3/ World-less-China's ending stocks divided by World-less-China's mill use, multiplied by 100.
4/ China's ending stocks divided by China's mill use, multiplied by 100.
5/ U.S. cents per pound.