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COTTON :
Review of the World Situation

International
Cotton
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Committee

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SUMMARY OF THE OUTLOOK FOR COTTON

ICAC Forecasts that World Production Will Grow by 2% in 2017/18

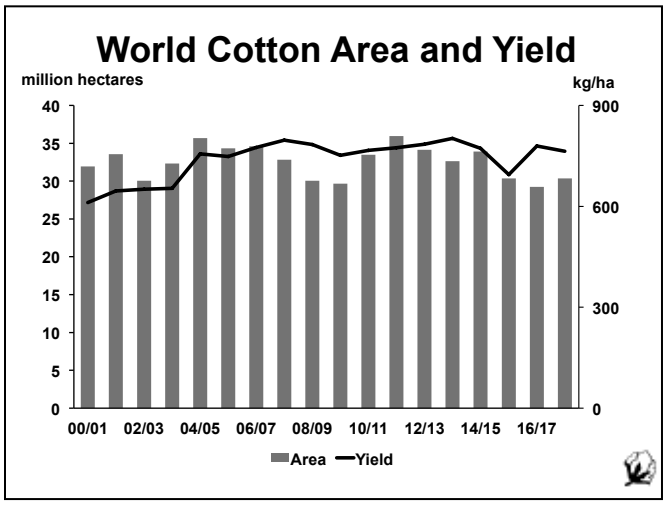
In its first estimate of the 2017/18 crop, the ICAC predicts that world cotton output will rise by 2% to 23.2 million tons. The expansion is the result of an increase in planted area, which is expected to grow by 4% to 30.4 million hectares after two seasons of contraction. After improving by 13% to 781 kg/ha in 2016/17, the world average yield is projected to decline by 2% to 764 kg/ha, which is in line with the 4-year average.

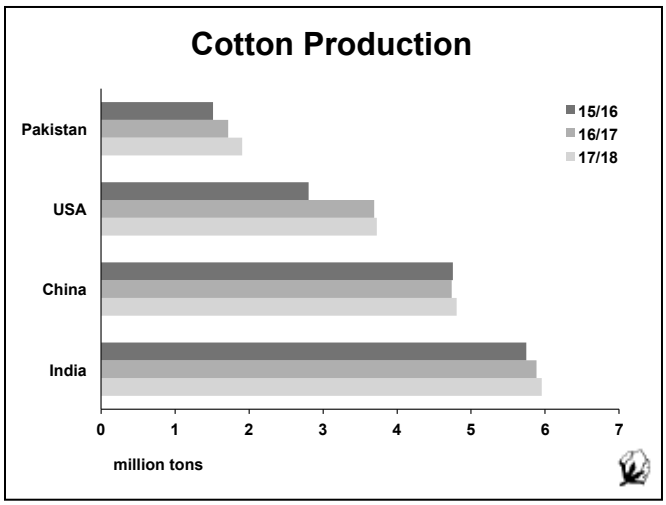
In 2016/17, the cotton area in India, the largest cotton-producing country, fell by 12% to 10.5 million hectares due to competition from food crops. However, the average yield recovered by 16% to 560 kg/ha, due to more favorable monsoon conditions than in the two previous seasons. As a result, production in 2016/17 is estimated to rise by 2% to 5.9 million tons. In 2017/18, India's area is forecast to recover by 7% to 11.2 million hectares as firm domestic cotton prices and less attractive prices for competing crops attract more farmers to cotton. Assuming a national average yield of 530 kg/ha that is similar to the 5-year average, production will increase by 1% to 6 million tons.

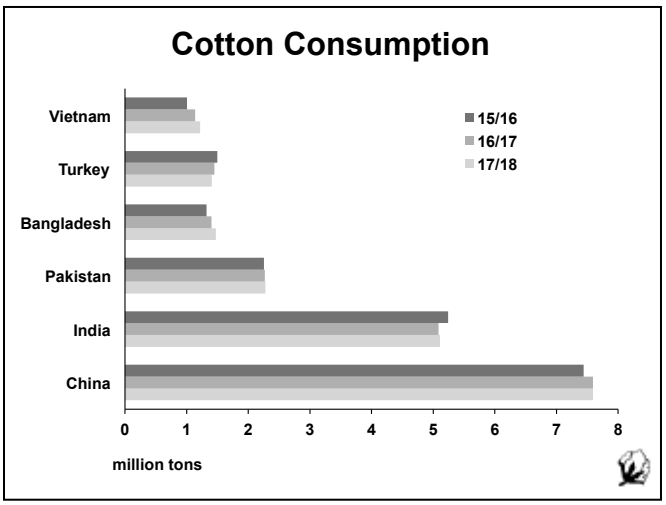
Cotton area in China declined for five consecutive seasons, reaching 2.8 million hectares in 2016/17 due to high production costs for cotton and better returns for competing crops. However, output has not fallen as quickly due to the fact that the share of cotton grown in Xinjiang, which has higher yields than other producing regions in China, has increased considerably. China's cotton production in 2016/17 is estimated at 4 million tons. In 2017/18, China's cotton area may expand by 3% to 2.9 million hectares, as cotton prices become more attractive than those of competing crops. Assuming a yield of 1,640 kg/ha, cotton output in China could reach 4.8 million tons in 2017/18.

Following a season of higher than expected yields and firm cotton prices, cotton area in the United States is expected to expand by 3% to 4 million hectares in 2017/18. The average yield in the United States improved by 12% to 958 kg/ha in 2016/17 due to beneficial weather and plentiful rains during the growing seasons. Output is estimated at 3.7 million tons. In 2017/18, production in the United States is projected to rise by 1% to 3.7 million tons, assuming an average yield of 935 kg/ha.

A significant drop in yields and poor returns in 2015/16 led to a 12% decrease to 2.5 million hectares in Pakistan's cotton







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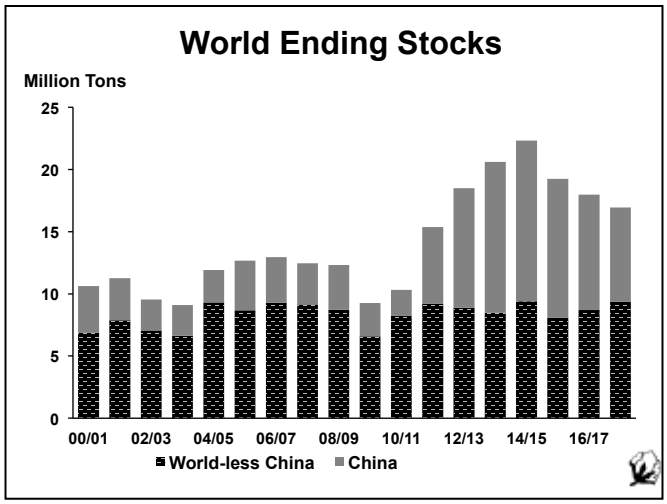


area in 2016/17. The average yield recovered by 32% to 699 kg/ha and output is estimated up by 13% to 1.7 million tons. Pakistan's cotton area is forecast to increase by 3% to 2.6 million hectares as better yields and firm cotton prices encourage farmers to plant more cotton. Assuming a yield of 733 kg/ha, Pakistan's production could reach 1.9 million tons.

World cotton mill use is expected to remain stable at 24.1 million tons in 2016/17 as high cotton prices discouraged growth in demand. However, mill use may expand by 1% to 24.3 million tons in 2017/18. Mill use in the top three consuming countries, China, India, and Pakistan, is expected to remain unchanged from 2016/17. However, mill use is forecast to grow in Turkey, Bangladesh, and Vietnam by 2% to 1.5 million tons, by 5% to 1.5 million tons, and by 7% to 1.2 million tons, respectively.

Given the continued growth in mill use in countries that depend on imports, world cotton trade is projected to increase by 5% to 8.2 million tons in 2017/18 from 7.8 million tons in 2016/17. Bangladesh is likely to maintain its position as the world's largest importer of cotton with its volume forecast to rise by 5% to 1.5 million tons. Vietnam's import volume is projected to grow by 8% to 1.3 million tons, making it the world's second largest importer. Given the gap between production and consumption expected in 2017/18 and the reduction in stocks from previous seasons, China's imports may increase by 15% to 1.1 million tons, assuming additional quota is allowed in 2018. Given the large exportable surplus and strong demand, exports from the United States are anticipated to rise by 17% to 3.2 million tons in 2017/18. India's exports are forecast to fall by 7% to 875,000 tons in 2017/18.

World cotton stocks are expected to decline by 6% at the end of 2016/17 to 18.1 million tons as China reduces its stocks by 17% to 9.3 million tons. However, stocks outside of China are projected to increase by 8% to 8.8 million tons or 36% of mill use in 2016/17.

PRODUCTION OUTLOOK FOR 2017/18

By Rebecca Pandolph, ICAC

International cotton prices fell by 22% to 71 cts/lb in 2014/15 and remained at that level until near the end of 2015/16 when prices rose to over 80 cts/lb. During the first five months of 2016/17, international cotton prices remained at nearly 80 cts/lb. In addition, prices for many competing crops have fallen, making cotton much more attractive to plant. As a result, cotton area is forecast to rise by 4% to 30.4 million hectares in 2017/18, but will remain below the average of 33 million hectares observed for the past 25 years.

In addition to high prices, factors such as lower prices for competing crops and fertilizer are encouraging farmers to expand plantings in 2017/18. Assuming that the world average yield declines by 2% to 764 kg/ha, similar to the 5-year average, world cotton production could increase to 23.2 million tons. This article describes the factors that will affect cotton plantings in 2017/18, and gives detailed projections for the largest producing countries and regions.

Factors Affecting Cotton Area and Production

After the Cotlook A Index, which is the most widely used measure of cotton prices on the physical market, spiked to an average of 164 cts/lb in 2010/11, it remained well-above the 50-year average of 67 cts/lb over the next three seasons. International cotton prices fell by 22% to 71 cts/lb in 2014/15 and remained close to that level through the first 10 months of 2015/16. However, a sharp drop in stocks led to a jump in international cotton prices in the final two months of 2015/16, reaching the high point of 85.35 cts/lb on July 27, 2016. While prices have declined slightly in the first five months of 2016/17 to an average of 80 cts/lb, they remain well above prices in the previous two seasons. High international prices and improved export earnings, partially due to a strong U.S. dollar, will encourage many farmers to expand plantings in 2017/18.

Growers also consider cotton's price relative to its main competing crops, which include maize, soybean, wheat, rice and sugar. As noted above, international cotton prices have been fairly stable, averaging 80 cts/lb in November 2016-January 2017, which is up 16% from the same period in 2015/16[1]. In contrast, the average prices for wheat and

1) Cotton prices are published by Cotlook Limited < http://www.cotlook.com/>.

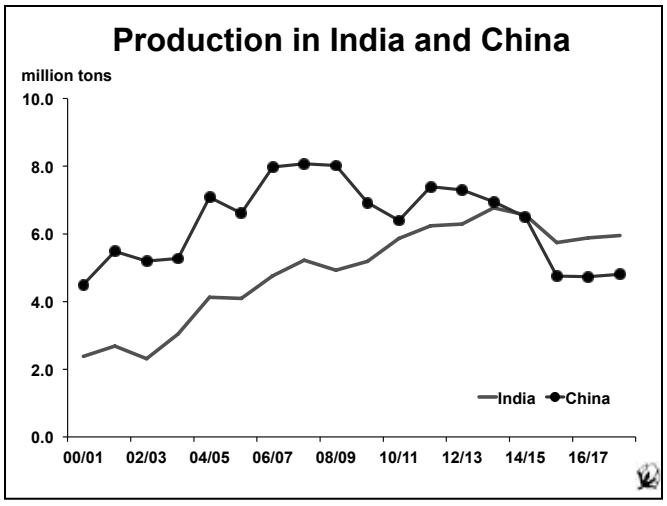
maize fell during the same time period. Wheat saw the most significant decrease, as its average price fell by 20% from $187/ton in November 2015-January 2016 to $149/ton in November 2016-January 2017. Maize prices fell by 5% during the same time period. In contrast prices for soybeans rose by 14% from $369/ton to $419/ton. Rice prices rose by 1% and sugar prices by 37%. Prices for cotton rose much more significantly during that time period and as a result, the price ratios of cotton to its competing crops are much higher this year, making cotton more attractive to plant. However, these prices refer to the period November 2016-January 2017, which is a few months before planting starts, so any changes over the next few months will affect the forecasts.

Agricultural production costs affect all crops, but not equally, since some crops require more inputs than others. For example, the production of wheat and soybean requires lower quantities of fertilizers and fuel than the cultivation of cotton. In addition, cotton requires larger amounts of pesticides and fuel (if machinery is used) than soybeans, maize and wheat. It also requires more knowledge and management from farmers compared to competing crops. In the first five months of 2016/17, the World Bank's energy index increased by 17% from the same period in 2015/16, while the fertilizer index fell by 21% during the same period.[3] The decrease in fertilizer prices will encourage more farmers to apply fertilizer, which in turn should boost the average yield and production. Labor costs have also become increasingly important, particularly in countries with little mechanization. Labor costs in many countries have increased as workers move from rural areas to cities in search of higher wages, thus creating scarcity of farm labor. At the same time, mechanical harvesting is not always a viable option, since most of the machines in current use are designed for large fields and unsuitable for the numerous small farms that still use manual picking.

Expectations in Major Producing Countries/Regions

India

In 2016/17, the cotton area in India fell by 12% to 10.5 million hectares, which is the second consecutive season of contraction. However, India maintains its position of having the largest cotton area globally. Despite higher prices for cotton at the end of 2015/16, returns for food crops, particularly pulses, were seen as more attractive than for cotton. After two seasons of decline, the average yield in India recovered by 16% to 560 kg/ha, which is the second highest yield on record (lower only than the 566 kg/ha recorded in 2013/14). Similar to 2013/14, plentiful monsoon rains later in the growing season as well as better pest control contributed to the boost in yield. As a result, production in 2016/17 is estimated to have risen by 2% to 5.9 million tons.



In 2017/18, India's area is forecast to recover by 7% to 11.2 million hectares. Domestic cotton prices remained firm in 2016/17 due to the late arrival of the crop and a smaller than initially expected harvest. At the same time, prices for some competing crops like maize are not as attractive, so some growers are expected to return to cotton in 2017/18. Assuming a national average yield of 530 kg/ha that is similar to the 5-year average, production is forecast to increase by 1% to 6 million tons.

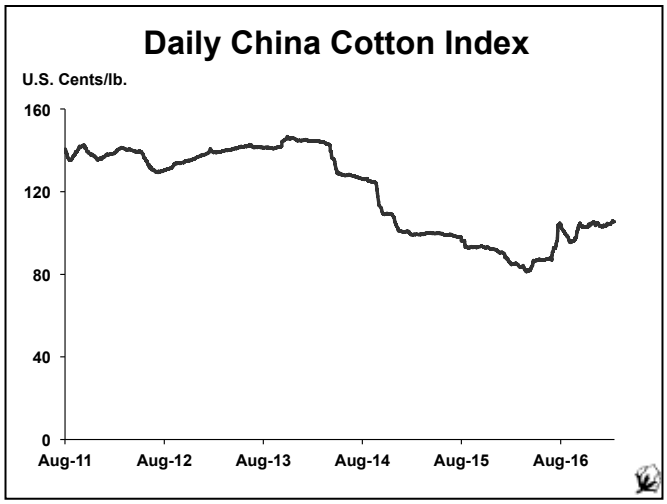
China

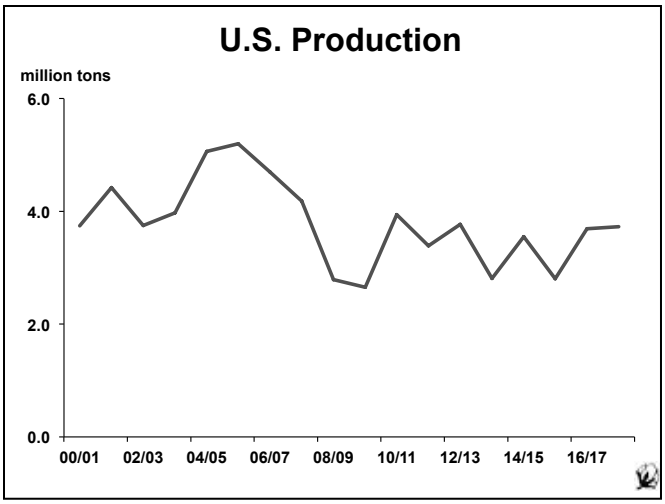
China ended its stockpiling policy in 2014/15, switching to a direct subsidy for cotton produced in Xinjiang, its largest cotton producing state, coupled with a smaller subsidy offered to producers in several inland provinces later in the season. Low prices resulting from the change in cotton policy and high production costs led to a significant contraction in cotton area during the last two seasons. The cotton area in China shrank by 29% in 2015/16 to 3.1 million hectares and by 7% to 2.8 million hectares in 2016/17, which is the lowest in the last 30 years. However, a larger share of production has shifted to Xinjiang, where yields are usually higher, and output has not declined as much as area. In 2015/16, the average yield advanced by 3% to 1,553 kg/ha, while production reached 4.8 million tons. In 2016/17, output remained at 4.8 million tons as the average yield increased by 7% to 1,665 kg/ha, offsetting the decline in area.

The China Cotton Index, which measures daily domestic cotton prices in China, declined substantially after China

2) Monthly quotes published by The World Bank Commodity Price Data "Pink Sheet" updated February 2, 2017: Soybeans (US), c.i.f. Rotterdam; Maize (US), no. 2, yellow, f.o.b. US Gulf ports; Wheat (US), no. 1, hard red winter, ordinary protein, export price delivered at the US Gulf port for prompt or 30 days shipment; Rice (Thailand), 5% broken, white rice (WR), milled, indicative price based on weekly surveys of export transactions, government standard, f.o.b. Bangkok; Sugar (world), International Sugar Agreement (ISA) daily price, raw, f.o.b. and stowed at greater Caribbean ports <http://www.worldbank.org/en/research/commodity-markets>.

3) Price Indices published by The World Bank Commodity Price Data "Pink Sheet" updated February 2, 2017; Index 2010 =100.

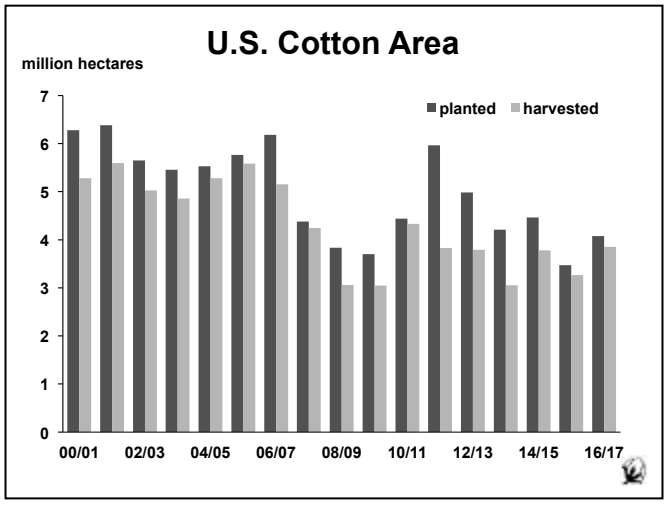




announced its new cotton policy, averaging 90 cts/lb in 2015/16. However, the Index rose over the first five months of 2016/17, averaging 102 cts/lb. Cotton prices are also more attractive than those of grains. The Chinese government has not announced the target price for cotton grown in Xinjiang as of the writing, but in 2016 it was 18,600 yuan per ton ($2.70/kg), which helps to offset the high production costs in China and encouraged farmers to expand area in Xinjiang. As a result, cotton area in 2017/18 is projected to grow by 3% to 2.9 million hectares, with a greater share planted in Xinjiang. Assuming yield is similar to that of last season, production is forecast to increase by 1% to 4.8 million tons.

United States

The U.S. planted cotton area expanded by 17% to 4.1 million hectares in 2016/17. Although prices for cotton were relatively low at the time planting decisions were made, prices for competing crops, such as maize and soybean, had fallen significantly, making cotton more attractive to plant. While heavy rain in some regions caused flooding and, in some cases, replanting, the additional water was beneficial for the cotton crop and reduced abandonment. The abandonment rate in 2016/17 is approximately 6%, the lowest since 2010/11, and the national harvested area is estimated at 3.9 million hectares, up by 18% from the previous season. The average cotton yield increased by 12% to 958 kg/ha, well above the 5-year average of 921 kg/ha, due to beneficial weather throughout the growing season. As a result, total production for the United States grew by 32% to 3.7 million tons in 2016/17.

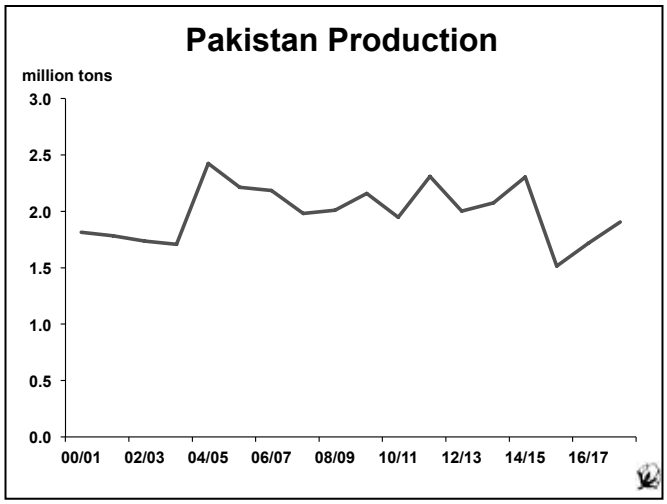


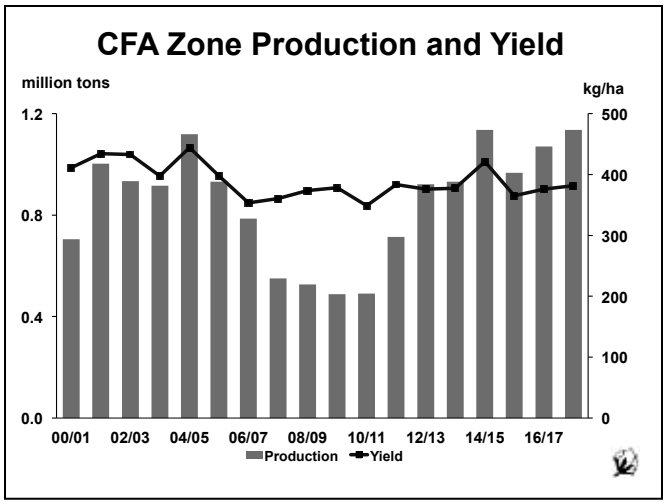
The U.S. planted cotton area is projected to expand by 11% to around 4.5 million hectares. For the second consecutive season, cotton prices are higher than those of most competing crops, making cotton more attractive to plant. The exceptional quality of the 2016 cotton crop, particularly with regard to average staple length and strength, as well as higher average yields in some regions, could also encourage farmers to expand cotton plantings in 2017. However, the abandonment rate is projected to increase to 12%, closer to the 10-year average of 16%, and harvested area is forecast up by 3% to just under 4 million hectares in 2017/18. Assuming that yield will be similar to the five-year average of 935 kg/ha, production is projected to rise by 1% to 3.7 million tons in 2017/18.

Pakistan

The cotton area in Pakistan declined by 12% to 2.5 million hectares in 2016/17 due to lower expected prices and poor returns in 2015/16 as the average yield declined by 32% to 528 kg/ha. However, prices improved during the growing season, which encourages farmers to use more inputs like fertilizer. In addition, measures, such as removing stalks at the end of the harvest and switching to more effective insecticides, were taken to combat the pink bollworm, which reappeared in 2015/16. The average yield improved by 29% to 680 kg/ha in 2016/17, which remains below the 10-year average of 705 kg/ha. However, the improved yield offset declines in area, and Pakistan's production grew by 13% to 1.7 million tons.

Increased consumption, projected in 2016/17 at 2.3 million tons, has created a shortage of domestic cotton and kept prices steady. Firm prices and increased yields will likely encourage farmers to expand cotton area, particularly as prices for some competing crops, such as corn, have fallen. In 2017/18, the





cotton area in Pakistan is projected to expand by 3% to 2.6 million hectares. The average yield could improve by 8% to 733 kg/ha, assuming that quality inputs are used and no new pests emerge. Production is forecast to increase by 11% to 1.9 million tons, which is slightly below the annual average production in the last 15 years.

CFA Zone

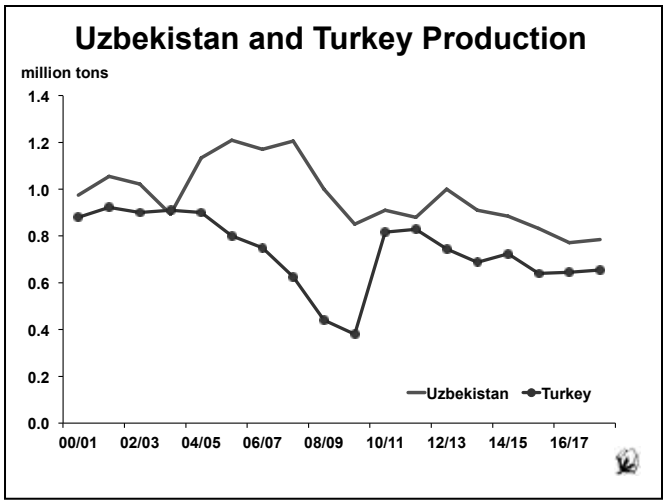
Five countries are expected to account for 89% of cotton production in the CFA zone[4] next season: Burkina Faso, Mali, Côte d'Ivoire, Benin and Cameroon. Regional production grew by 22% to a record 1.1 million tons in 2014/15 due to expanded cotton area and greatly improved yields. However, regional output fell by 15% to 966,000 tons in 2015/16, due largely to a 13% decline in the regional average yield to 365 kg/ha. In 2016/17, the regional cotton area expanded by 8% to 2.8 million hectares, the highest level on record, due to better returns from 2015/16 and higher prices that encouraged farmers to expand cotton area. After declining by 1%, the average price paid to farmers in the CFA zone increased by 3% to 249 CFA francs/kg of seedcotton in 2016/17. The regional yield also increased by 3% to 376 kg/ha, resulting in an 11% increase of regional output to 1.07 million tons. In 2017/18, area is projected to increase by 5% to just under 3 million hectares, though production may increase by 6% to 1.14 million tons.

Burkina Faso regained its place as the largest producer in the CFA zone in 2012/13 and has remained there through 2016/17, with production estimated at 285,000 tons, which accounts for around 27% of all cotton produced in the CFA zone. Beneficial weather during the growing season improved the national average yield by 5% to 385 kg/ha in 2016/17, and output is estimated up 17% to 285,000 tons. Burkina Faso is also one of the few countries in Africa that plants biotech cottonseed commercially, but in 2015/16, Interprofessional Cotton, which represents various stakeholders from the cotton sector, decided to phase out the usage of biotech cotton. This is due largely to the fact that the lint yields have been much lower than expected as a result of poor ginning outturn, which makes cotton less profitable for ginneries. The cotton area is projected to expand by 5% to 777,000 tons, due to the ongoing support to the industry and improved yields that led to higher returns in 2016/17. Assuming an average yield of 405 kg/ha, production could grow by 11% to 315,000 tons.

Mali is expected to remain the second largest producer of cotton in the CFA zone in 2017/18, accounting for around 24% of the region's production. Its area is forecast to expand by 5% to 689,000 hectares and, assuming yield is similar to its 4-year average of 392 kg/ha, production is projected to increase by 3% to 270,000 tons.

In 2016/17, production in Côte d'Ivoire represented 14% of all cotton produced in the CFA zone. Despite higher prices, cotton area contracted by 14% to 345,000 hectares, due largely to the late arrival of rains that prevented planting. Poor weather also contributed to the decline in the average yield from 441 kg/ha in 2015/16 to 432 kg/ha. As a result, production fell by 16% to 149,000 tons. In December 2016, Côte d'Ivoire's Council of Ministers endorsed a new zoning plan for the cotton-growing area. Currently six cotton companies operate there. The new plan would transfer a portion of the cotton zone to each of the six companies and grant them exclusive management and purchase rights over their respective zones. The criteria for allocating the zones are based on ownership of installed cotton gins, legal precedence stemming from the 1998 liberalization, and the scale of agricultural activities, including the quality of advisory services. The new plan will be implemented during 2017/18. The cotton area in Côte d'Ivoire could expand by 5% to 362,000 hectares. If weather is beneficial and rains are timely, the average yield is projected to rise by 5% to 455 kg/ha, and production to increase by 10% to 165,000 tons.

4) Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Cote d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal, Togo.



Uzbekistan

Cotton plantings in Uzbekistan are little affected by variations in international prices, since the government sets targets for cotton plantings. In 2016, the government announced its plan to make cuts in the cotton area by 2020, in order to reduce cotton planting in low-yielding areas and replace them with other agricultural crops. Area under cotton in 2016/17 contracted by 4% to 1.3 million hectares and is forecast to decline by 3% to 1.2 million hectares in 2017/18 in line with the planned reductions of around 170,500 hectares per year. The average yield in Uzbekistan fell by 4% to 618 kg/ha in 2016/17, due to lack of quality inputs, pest pressure, insufficient water, and excessive heat during the growing period. As a result, Uzbekistan's output is estimated down by 7% to 772,000 tons in 2016/17. However, the average yield is expected to improve by 5% to 647 kg/ha in 2017/18, similar to the 3-year average, and production could increase by 2% to 784,000 tons in 2017/18.

Turkey

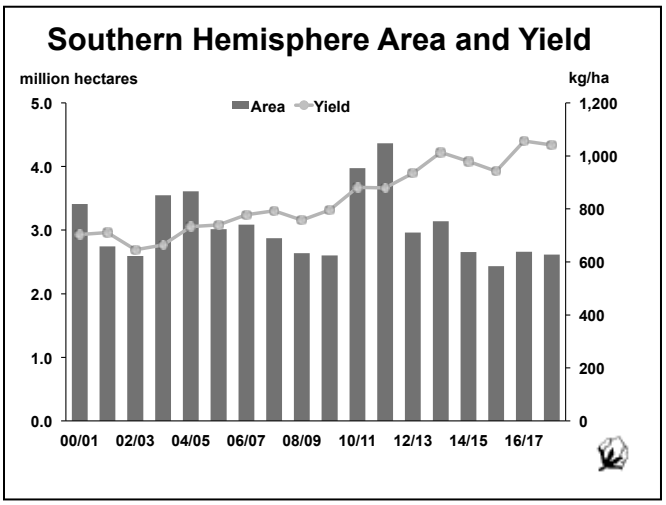
In 2016/17, beneficial weather improved the average yield by 5% to 1,555 kg/ha and production reached 645,000 tons. The Turkish government invested significantly in the Southeastern Anatolia region (GAP), including building irrigation infrastructure, which encouraged farmers to expand the area under cotton in this region in the last few seasons. However, interest in growing cotton has also dwindled due to the financial weakening of the Agricultural Sales Cooperatives and Unions (ASCUs) over the last decade after their restructuring in the 2000s. Before the restructuring, the ASCUs provided support to farmers of small and medium-sized holdings. In 2017/18, cotton area is projected to grow by 3% to 427,000 hectares, due to the high prices of cotton and strong local demand. Turkey is a significant importer of cotton, since its mill use greatly outpaces local supply. However, the depreciation of the Turkish lira against the U.S. dollar makes imports more expensive, bolstering demand for domestic cotton. Assuming yield is equal to the 4-year average of 1,532 kg/ha, production is forecast to rise by 1% to 655,000 tons in 2017/18.

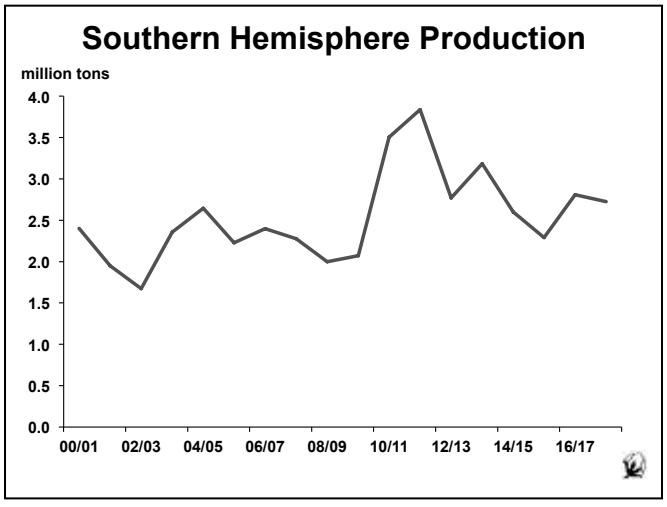
Rest of Northern Hemisphere

In the rest of the northern hemisphere, which accounts for around 7% of Northern Hemisphere cotton output, the area is expected to expand by 1% to 2.4 million hectares. The average yield for these countries is forecast to remain unchanged, and as a result, production could rise by 1% 1.5 million tons in 2017/18.

Southern Hemisphere

Planting decisions in the Southern Hemisphere are made during the second half of 2017 and will respond to commodity prices prevailing at that time. In 2016/17, cotton area in the Southern Hemisphere expanded by 9% to 2.7 million hectares and the regional average yield improved by 12% to 1,058 kg/ha. The expansion in area is due largely to Australia where cotton area nearly doubled to 520,000 hectares. However, much of the expansion occurred in rainfed areas and the average yield is anticipated to fall by 15% to 1,970 kg/ha. However, while cotton area contracted by 5% to 905,000 hectares in Brazil, the largest cotton producer in the Southern Hemisphere, its yield is likely to rise by 16% to 1,568 kg/ha, which contributes greatly to the improvement in the region's





yield. In 2017/18, the cotton area in the Southern Hemisphere is currently forecast to decline by 2% to 2.6 million hectares, assuming that international cotton prices fall by the end of 2017. Based on recent average yields for each country, Southern Hemisphere production is forecast to decline by 3% to 2.7 million tons and the share of the Southern Hemisphere in world cotton production would remain unchanged at 12% in 2017/18.

Conclusion

The sharp decline in cotton stocks in 2015/16 pushed international cotton prices up above 80 cts/lb and prices have remained around that level during the first five months of 2016/17. At the same time, prices for competing crops have fallen, making cotton much more attractive to plant. As a result, the world cotton area is expected to expand by 4% to 30.4 million hectares in 2017/18. However, the average yield is expected to decline by 2% to 764 kg/ha, limiting growth in production. World cotton output is forecast to increase by 2% to 23.2 million tons in 2017/18.

COTTON PROMOTION IN BRAZIL

Abrapa Launches the Campaign "Sou de Algodão"

Prepared by The Brazilian Cotton Growers Association (Abrapa)

Abrapa is the Brazilian Association of Cotton Producers, which brings together 99% of the cotton farms in Brazil, and has launched a campaign to promote the use of cotton in this country. This initiative is not an isolated action or campaign just to promote Brazilian cotton, but the kick-off of a series of integrated actions covering the entire cotton market chain, from the producer to the consumer, a huge program intended to educate Brazilian consumers with regard to the main benefits of cotton and how to evaluate, find and wear cotton on all occasions.

In the Brazilian market, the use of cotton in fabrics averages about 54%, considering only the formal market for clothing. In other words, about half of fashion production uses cotton, whether blended or not with man-made fibers. This share of the market tends to be even smaller when one takes into account the informal market and imported goods.

In 2015, Abrapa, recognizing that the global trend of reduction of cotton use was occurring in the local market and that the fashion industry had been slowly replacing cotton by synthetic fibers in recent decades, hired the Markestrat Consulting Company to provide a diagnosis of the market and develop a Plan to Promote the Use of Cotton, in order to encourage the textile industry to adopt a higher cotton content.

To prepare this diagnosis, Markestrat used several sources of data, such as surveys conducted by Bayer CropScience and annual reports from associations related to fashion market, such as ABIT (Brazilian Association of Textile Industry), and interviewed several companies from each link of the cotton value chain in order to understand how the market dealt with cotton and why the market share of man-made fibers was on the rise.

The diagnosis showed that, as in other countries all over the world, cotton had been losing share for several reasons, especially because the cotton industry (spinners), on one hand, approached the fabric (knitting and weaving) industries with small range of products and used a commodity approach on a transactional basis, while the man-made fiber industry, on the other hand, approached them with partnerships and on a relational basis, developing and creating new fibers and fabrics in conjunction with the fabric industries. In addition to technical reasons, on the consumer side, the preference for other fibers had different reasons for specific segments, as uncovered in Markestrat interviews: in women's fashion, man-made fabrics or cotton fabrics with high percentage of man-made fibers have a better fit, are more flexible and have a lower cost; underwear and socks with a high percentage of elastane and man-made fibers fit better and are more comfortable; bedding, dining and bath products with man-made fabrics have a lower cost; and sportswear technology using man-made fibers has advanced to allow skin breathing and wicking. Especially in masculine clothing, a reduction in

Table 1 – Attractiveness of Segments

Segments	Quantitative Data (values in millions BRL)				
	Market Size 2014	% Cotton Use	Market Size Cotton	% Growth 2015/19	Adjusted Mkt Size 2019
Women's	29,825.70	21%	6,263.40	3.03%	6,453.18
Men's	16,174.70	64%	10,351.81	-0.58%	10,291.77
Socks/Accessories	4,090.10	61%	2,494.96	5.20%	2,624.70
Kids/Teen's	18,804.80	83%	15,607.98	9.32%	17,062.65
Denim	17,210.00	78%	13,423.80	7.13%	14,380.92
Home-wear	15,326.10	83%	12,720.66	5.50%	13,420.30
Sportswear	12,546.90	11%	1,380.16	8.93%	1,503.41
Total	**113,978.30**	**54.6%**	**62,242.77**	**5.50%**	**65,736.92**

Source: Markestrat, estimated values based on diverse fonts, 2015. Incentive Plan for Cotton Use; diagnosis.

the use of cotton is forecast, mainly because of a change in attitudes to man-made fibers and advances in technology in the underwear and sportswear segments.

Some quotes illustrate the reasons why the companies are not using more cotton: "When we purchase a product, all we see is price and it becomes inevitable that about 70% of our suppliers are Chinese" (buyer from a major retailer); "When we look for suppliers, we search for those who meet the demands of our stylists. 10% of spinners cooperate. The other 90% try to push their products as commodities. Fiber quality is not the problem. The point is that the Brazilian market is poor in textile yarn suppliers and plain fabrics. Low investment, low-skilled labor, technological backwardness." (director of supply of a clothing manufacturer); "Our customers don't know the difference and don't look at fiber content labels. We manufacture similar products and they think they are made of cotton." (underwear production supervisor).

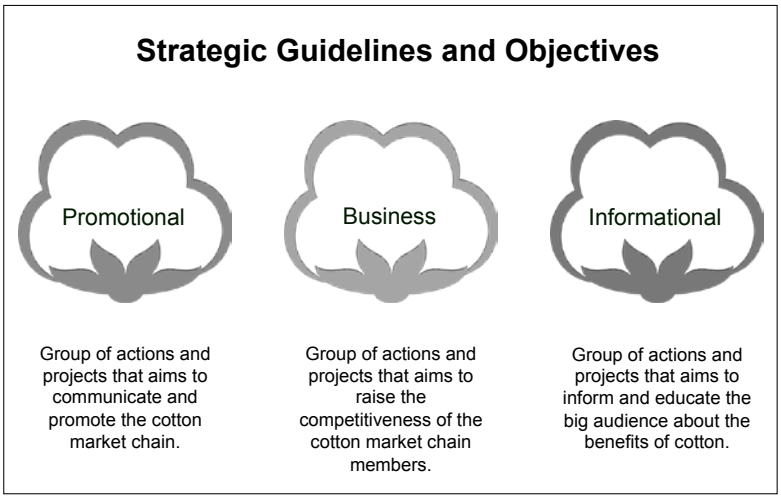
As can be seen in Table 1, from the Plan to Promote the Use of Cotton, by Markestrat, women's fashion represents the biggest challenge, since the preference for man-made fabrics is higher than in other segments, mainly due to the flexibility and the characteristics of the fabric, which provides fluidity and conforms to the body.

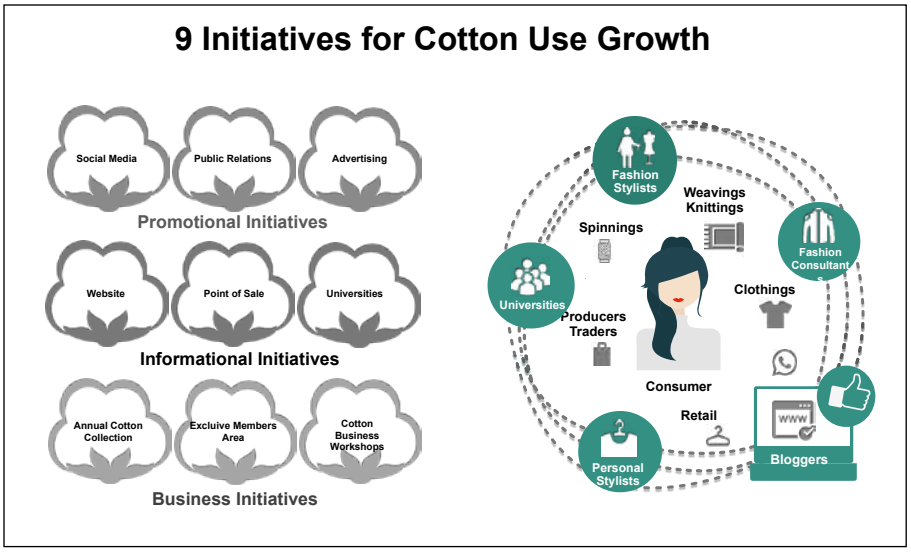
Some segments still have a high percentage of cotton, such as home-wear and baby and child wear, in which cotton accounts for 83% of the total, men's wear (64%) and socks and accessories (61%). The common point in these segments with regard to the preference for cotton is softness and comfort. Denim is the biggest user of cotton in Brazil. With a 78% average share of cotton in this fabric, there is a forecast for growth, especially in plain denim. The best denim products in the market are 98 to 100% cotton, and the attribute associated with cotton in this segment is resistance and durability.

It should be noted, however, that these general figures on cotton usage in Brazil are probably overestimated by 10 to 20% due to two important considerations. First, the data only take into account the formal market and this particular industry in Brazil is characterized by a high degree of informality, which reduces the accuracy of any estimate. Secondly, the data used is based on 2014, before two years of economic recession in Brazil. Therefore, the challenge of increasing cotton usage to higher levels is even greater.

Softness, comfort and durability are positive attributes that can easily be associated with cotton, and are desired by most consumers in all segments. Considering global consumption trends, which value comfortable, natural, sustainable and durable goods in several segments, including fashion, the campaign focuses on the positive attributes of cotton to educate and promote the use of cotton-based products.

To reverse the decrease in the consumption of cotton and build awareness about the benefits and versatility of cotton in fashion, the Plan to Promote the Use of Cotton defined **3 strategic guidelines** to cover the entire cotton market chain: **promotional guidelines**, with actions that will communicate and promote the cotton to consumers and the industry all along cotton market chain; **business guidelines**, with actions to improve the competitiveness of the industry; and **informational guidelines**, with actions to inform and educate





consumers about the benefits and characteristics of cotton, associated with their lifestyle, health and comfort.

These three strategic guidelines are broken down into nine initiatives for the growth of cotton usage. On the Promotional side, initiatives will cover social media, public relations and advertising; on the Business side, initiatives focus on partnerships with brands, fashion collections, fashion shows and workshops to encourage business among the companies in the market chain; on the Informational side, initiatives will be on the website, point-of-sale materials, visual merchandising and actions in retail spots, and actions with universities.

The study also evaluated other successful initiatives and used them as benchmarks. An important source of inspiration was Cotton Incorporated (www.cottoninc.com), a similar American initiative that increased cotton usage from 35% to 60% in almost sixty years, through a variety of actions, such as a 24-hour cotton fashion show that brought awareness and got a mention on the Guinness Book of Records, and through their website which contains rich and relevant content for a wide audience, covering cotton production, quality and sustainability, as well as where to find cotton, on the consumer-focused website from Cotton Incorporated (www.thefabricofourlives.com), with links to the retail websites of partner brands that use and promote cotton in their products. Cotton Inc. reaches all those in contact with cotton. The initiative has educated consumers over many years through tips and articles to convince them to choose cotton for all occasions, on websites and social media.

"The Other White Meat", another American initiative, is a campaign that promotes the consumption of pork and seeks to dispel pork's reputation as a fatty protein. Through their website (www.porkbeinspired.com), "The Other White Meat" educates and informs consumers on the use of pork with recipes and how-to-use-pork tips, with different cuts and nutrition facts on their blog, and inspires and informs a large audience through actions on social media. The campaign is a successful initiative and was recognized, in 2000, as the fifth most memorable promotional tagline in the history of contemporary advertisement in a study conducted by Northwestern University.

Like the American pork initiative, ABCS (Brazilian Association of Pork Farmers) teamed with the largest local supermarket chain, GPA (Pão de Açucar Group), to promote the consumption of pork and led major brands to announce the extension of the promotion period of pork due to the success of the "1st National Pork Week", which increased sales volumes by 77%.

With the diagnosis and the benchmarking cases, which analyzed what or who influences consumers, the Plan defined that the campaign should, first, get support from such influencers, those that communicate and move the market, and then start building demand, from the market to the industry. So, initial actions were focused on fashion influencers, namely fashion stylists, personal stylists, fashion bloggers and celebrities associated with the fashion market.

Inspiring consumers with a campaign that evokes the mood associated with cotton – softness, lightness, fun, comfort –, and sensitizing them to look for these attributes when purchasing an article of clothing is the starting point. To continue influencing consumers to choose cotton and demand a higher percentage of cotton, the campaign should educate them with fashion or care tips, and orient how to find cotton when buying a product, or where to find cotton in the marketplace.

Recognizing the importance of the influencers in the fashion market, Abrapa chose to launch the campaign "Sou de Algodão" in an event during São Paulo Fashion Week, the most important fashion week in Brazil, in October 2016, with the presence of the leading names in the fashion market, bloggers, fashion celebrities, press and fashion universities. Alexandre Herchcovitch and Martha Medeiros, famous fashion stylists that use cotton in their pieces, were invited to be the ambassadors of the campaign, and several bloggers were invited to endorse and publicize the campaign through their personal pages on Instagram, using the hashtag *#soudealgodão*. The event was widely covered by the electronic and print press and several media actions were started after the event.

The campaign "Sou de Algodão" was created by the BETC Advertising Agency, from Sao Paulo, which has experience in the fashion market all over the world. The slogan "Sou de Algodão" means "I am made of cotton" and calls for engagement in the campaign by all those that consume or

are potential consumers of cotton. It means that everyone in the chain, from consumers to cotton producers, own the inspirational values of the cotton (versatility, softness, fun, naturality, originality, etc.) and desire more cotton. BETC launched an extremely inspirational campaign, a brand and key visuals that translate the positive attributes of cotton and make tangible the mood that the campaign wants to deliver to the audience: something fun, light, natural, soft and original.

The website www.soudealgodao.com is the main informational hub to connect all the links of the cotton market chain, with a blog area that brings information about the campaign for engagement, information about cotton, production sustainability for understanding how Brazilian cotton is grown, respecting all the parameters of a sustainable crop with non-abusive work conditions, and fashion tips, curiosities and information. There is also an Instagram page for inspiration (https://www.instagram.com/soudealgodao/) and a Facebook page for information (https://www.facebook.com/soudealgodao/?fref=ts).

The campaign will cover the Brazilian industry and several actions will begin in 2017, such as partnerships with brands and fashion stylists, point-of-sale actions, projects with fashion universities and colleges, reinforcement of digital media coverage and public relations, improvement of website content and other initiatives.

With this program, Abrapa expects to increase the share of cotton usage in all fashion segments from about 45% to 65% over ten years, entailing a growth of over 10% in cotton production in the farms, and promote the strengthening of the whole cotton industry.

Abrapa brings together 99% of the cotton farms in Brazil and standardizes production throughout its sustainability initiatives. All members of Abrapa adhere to the standards of the ABR (Responsible Brazilian Cotton) program and 80% of Abrapa members belong to the BCI (Better Cotton Initiative). This means that all cotton farms associated with Abrapa grow their crop through sustainable initiatives and labor standards. About 45% of Brazilian cotton production is exported to countries such as Vietnam, Indonesia, South Korea, Turkey, China, Malaysia, Pakistan, Thailand, Taiwan and Bangladesh.

The campaign “Sou de Algodão” is an initiative of Abrapa and began in October 2016. It has with two other supporters: the IBA (Brazilian Cotton Institute), which regulates and finances cotton research and projects, and Bayer CropScience. With partnerships with other companies, Abrapa expects to engage other supporters in the program in the near future and to strengthen the campaign even further.

COST OF PRODUCTION OF COTTON FELL IN 2015/16

By Rafiq Chaudhry and Rebecca Pandolph, ICAC

The Secretariat undertakes a survey of the cost of production of cotton every three years. The current report published in October 2016 includes data for the year 2015/16. Thirty-one countries, which account for 87% of the world cotton area, participated in this survey. Eleven countries provided data for more than one region, thus raising the total number of entries to 53. The questionnaire used to gather the cost of production data has remained unchanged since 1991. The only addition to the questionnaire has been the ‘technology fee’, which is related to insect-resistant and herbicide-tolerant cotton in countries that have commercialized biotech varieties. The unchanged questionnaire allows for comparison of data over time. All inputs and agronomic operations are covered in the questionnaire, and only a few entries from some countries are classified as ‘other’. However, one of the main shortcomings for comparing the net cost of production per kilogram of

cotton is the lack of complete data for some countries.

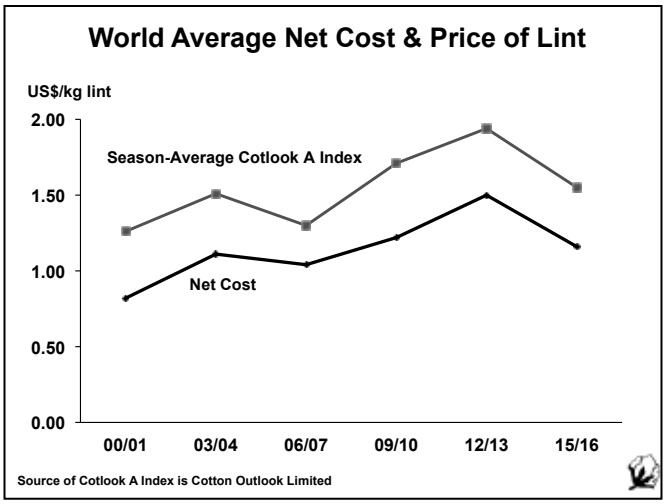
Differences in production systems, failure to take into account opportunity costs for operations done by farmers themselves, and government support for costs of inputs continue to be a problem in making accurate comparisons. Many countries either have minimum economic and fixed costs, or simply do not estimate these costs, while in other countries economic and fixed costs form a major portion of the total expenses incurred to grow cotton. There are certain limitations that are country-specific and must be considered when making inter-country comparisons.

In Argentina, China, Colombia, India, Pakistan, Sudan and the USA, the technology fee for insect resistance and herbicide tolerance (where applicable) is included in the price of the planting seed. Australia, Brazil, Burkina Faso, Paraguay and South Africa have reported the technology fee separately. In Argentina, the cost of insect control is the cost of four sprays against the boll weevil, as well as pheromone traps for the same insect. Additionally, some chemicals are also applied during pre-soaking irrigation to eliminate regrowth and weeds. Plowing before sowing is usually performed by chiseling in Santiago del Estero and by disk harrow, cultivator and toothed-harrow in Chaco province. In Indonesia, the cost of production data refers to mixed cropping with cash crops. The average lint yield in Pakistan in 2015/16 was only 528 kg/ha, as compared to the average yield of 723 kg/ha in the ten previous seasons. Similarly, there are other issues that are specific to certain countries that need to be taken into account when comparing countries.

The U.S. data is for five regions *i.e.* Heartland, Mississippi Portal, Fruitful Rim, Prairie Gateway and Southern Seaboard. These regions are consistent with delineation across all commodities and attempts to classify farms into homogeneous resource and farm-type regions. Data were taken from http://www.ers.usda.gov/data-products/commodity-costs-and-returns.aspx. The USDA's Economic Research Service compiled this report using data from the Agricultural Resource Management Survey. The data categorized as insecticides and weed control include all chemicals, such as herbicides, insecticides, growth regulators and defoliants. The cost of picking is not calculated separately, but covered under various categories including fuel, lube and depreciation.

Net Cost of Production of Lint - World Average

The data for the 2015/16 season from thirty-one countries, which accounted for 87% of the world cotton area in the year, showed that the net cost of production of cotton lint declined in 2015/16 after many years of continuous increases. Compared with 2012/13, the net cost of producing a kilogram of lint, which does not include land rent and the value of commercial seed after ginning, declined by 23% to $1.16 in 2015/16. The decline of 34 cts/kg of lint produced is due to the two main reasons below:



- The cost of inputs per kilogram of lint produced did not increase for any of the inputs in 2015/16. The costs of insect control, weed control, ginning and harvesting declined in 2015/16. The cost of fertilizer per kilogram of lint produced remained at the same level as in 2012/13.
- For the purpose of calculating the net cost of production per kilogram of lint, the income from selling commercial seed after ginning was deducted from the gross cost. The value of commercial seed after ginning increased by over 50% in 2015/16 in comparison with 2012/13.

Irrigated vs. Rainfed Cotton

The average net cost of production per hectare in 2015/16 was $1,006 under irrigated conditions and $776 under rainfed conditions—both lower than in 2012/13. Lint yield in 2015/16 averaged 957 kg/ha under irrigated conditions and 647 kg/ha under rainfed conditions. The 31 countries that participated in the 2015/16 cost of production survey planted 60% of their area under irrigated conditions and 40% under rainfed conditions, almost the same ratio as was observed in the participating countries in 2012/13. It is cheaper to produce cotton under irrigated conditions, due to higher yields, than in rainfed conditions. The cost per kilogram of lint produced under irrigated and rainfed conditions is $1.05 and $1.20 respectively. Sixty-nine percent of world production in 2015/16 came from irrigated conditions. On average only 7 US cents were spent on irrigation to produce a kilogram of lint in 2015/16.

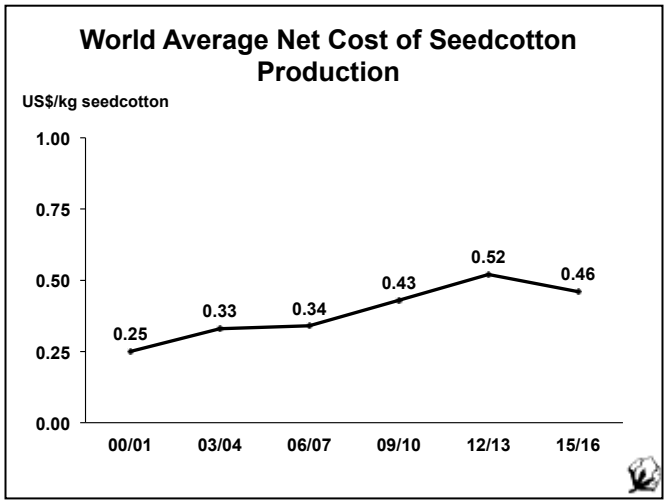
Biotech vs. Non Biotech Cotton

Among the countries that have commercialized biotech cotton, the majority of the area under cotton is planted to biotech varieties/hybrids. The data show that biotech cotton lowered the net cost of production. The net cost of production in countries that allow the use of biotechnology was $1.05/kg of lint. The net cost of production in non-biotech countries averaged $1.29/kg of lint. The average yields in the two groups were almost equal. However, higher spending in producing a hectare of conventional cotton resulted in a higher net cost per

kilogram of lint. In the 31 countries that participated in the survey, biotech varieties accounted for 77% of the area and 91% of production.

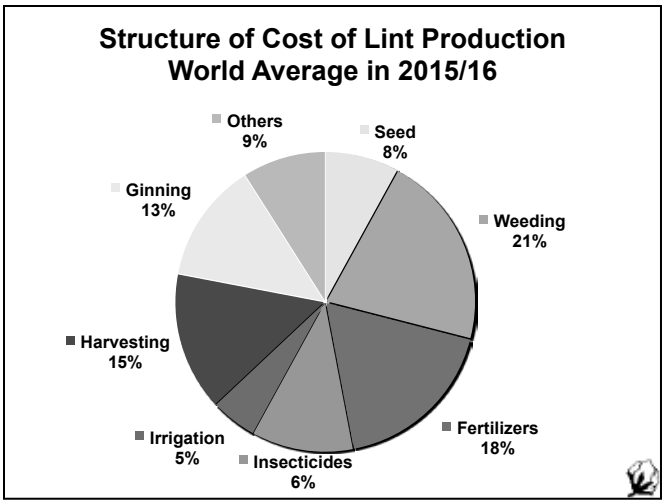
Net Cost of Production of Seedcotton - World Average

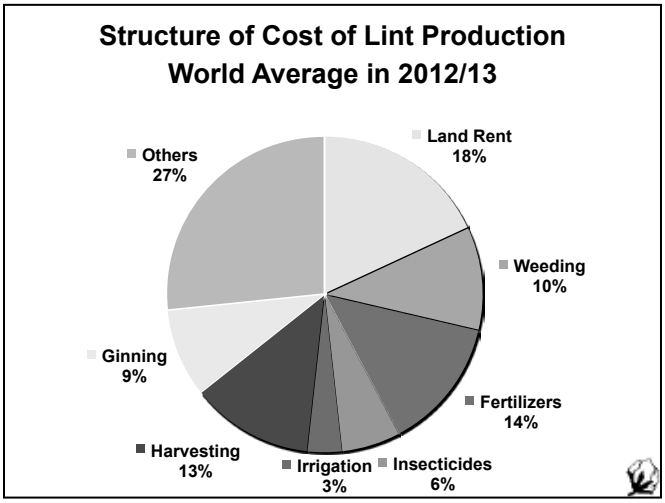
The average cost of production of seedcotton was $0.43/kg in 2009/10 and $0.52/kg in 2012/13 and has been increasing since at least 2000/01. The cost of production of a kilogram of seedcotton doubled in 15 years, from $0.25 in 2000/01 to $0.52 in 2012/13. For the first time this trend has reversed with a net cost of production of seedcotton at $0.46/kg in 2015/16. These seedcotton cost calculations are based on the assumption that farmers are self-cultivators and do not pay rent for land use. The lower cost of production of seedcotton is quite in line with the lower net cost of production of lint/kg, which declined from $1.50/kg in 2012/13 to $1.16/kg in 2015/16.



Structure of Cost of Production

Considering the gross cost of lint production, 18% (36 cents) was spent on renting land to produce a kilogram of lint. The most expensive input came out to be fertilizers, which accounted for 14% of the gross cost (27 cts/kg lint produced), followed by 13% (24 cts/kg) for harvesting/picking and 10% (21 cts/kg) for weeding. The cost of insect control declined over the last decade and stood at only 6% of the total production cost in 2015/16. Irrigation accounted for only 3% of costs. As with all other inputs and operations, the reported cost of irrigation represents the average cost of irrigation per kilogram of lint produced in all participating countries. In some cases, the 10 cts/kg lint spent by producers on planting seed also includes the technology fee for biotech trait(s). The 'others' category includes economic costs and fixed costs, such as repairs and machinery, in addition to the operations and inputs not mentioned in the pie chart.

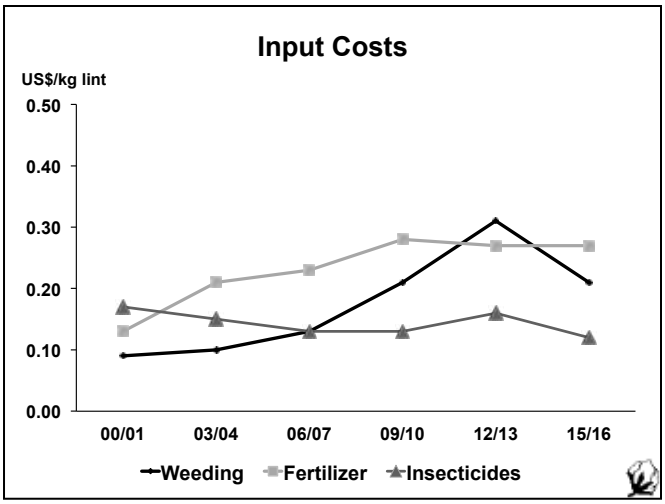


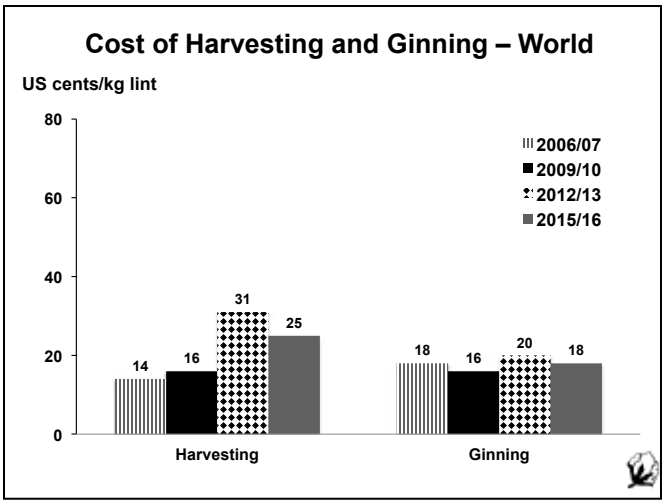


Cost of Operations and Inputs

Weed Control

Weeds can be removed culturally, manually, mechanically or chemically, and it is very important that they be removed in a timely fashion. The main reason for the increase in the cost of production in 2012/13 was an increase in the cost of weeding. The use of herbicides is gaining popularity in many countries, while the costs of labor and cultivation are increasing. The use of herbicides has environmental consequences, but herbicides provide perfect control for a longer time if applied properly and in correct doses. Herbicides can be used before or after sowing, depending on the field situation and the probability of eliminating weeds. Herbicide products have been in use for much longer than insecticides because insecticides have changed frequently in response to the development of resistance and improved control methods. In contrast, the weed complex has not changed significantly in most countries. One of the first herbicides used in the world, 2,4-D, remains one of the most commonly used herbicides. Herbicide-tolerant cotton was commercialized in 1995/96, one year before





insect-resistant cotton was released. The current report shows that concerns about weed control are rising. In 2000/01, 9 cents were spent per kilogram of lint produced, compared to 21 cts/kg of lint in 2009/10, and 31 cts/kg of lint in 2012/13. Weed control costs declined to the level of 2009/10 i.e. 21 cts/kg lint produced, most probably due to increased adoption of chemical weed control.

Fertilizers

The cost of fertilizers and their application more than doubled in the nine years from 2000/01 to 2009/10. On average, a cotton grower spent 13 cents on fertilizer to produce a kilogram of cotton lint in 2000/01, compared to 28 cts/kg in 2009/10 and 27 cts/kg in 2012/13. The 2015/16 data indicate that farmers are finding ways to best utilize the nutrients that have already been applied, since the cost of fertilizers remained stable at 27 cts/kg lint produced. Nitrogen use has been optimized and now there is a need to lower the quantity of fertilizers applied, particularly nitrogen fertilizers. Efforts have to be made to enhance nitrogen use efficiency.

Insecticide/Insect Control

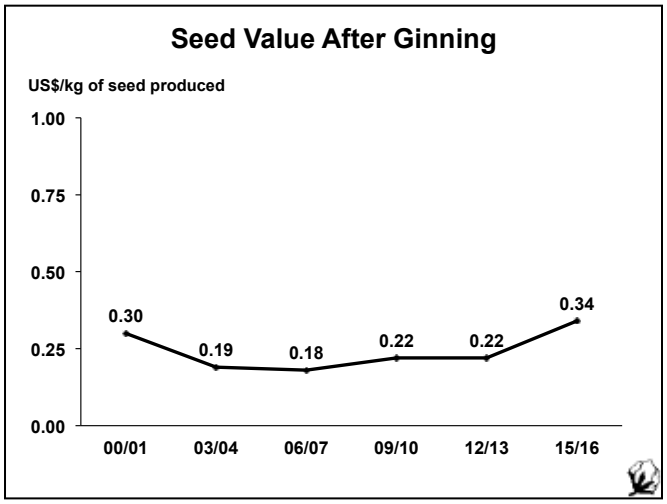
Among the five major components of the cost of production of lint, insecticide costs are the least important and represented only 6% of the total cost in 2015/16. Producers spent more money on fertilizers, weeding, picking and ginning to produce lint. Fifteen years ago a farmer was spending more money on insecticides and their application than on fertilizers and weeding. In 2000/01, on average farmers spent 17 cents on insecticides to produce a kilogram of lint, compared to 9 cts/kg on weeding and 13 cts/kg on fertilizers. While the cost of weeding and fertilizers has been rising, the cost of insecticides and their application has declined. Based on the average of the 31 countries that participated in the current survey, a cotton grower spent 12 cents on insecticides in 2015/16 to produce a kilogram of lint as compared with 16 cts/kg in 2012/13. Many factors are responsible for the decline in insect control costs. The adoption of insect-resistant biotech cotton undoubtedly lowered the need for insecticide use. The biotech fee in some cases is included in the seed cost rather than being counted as insect control costs. Growers are reluctant to use insecticides because of their negative experiences in the past. Producers suffered because of a heavy reliance on insecticide use, and the negative consequences of insecticide use are better understood now than when these products were introduced and broadly encouraged.

Harvesting and Ginning

The cost of picking includes bagging and stick cutting/slashing. The cost of picking/harvesting has shown high variation from survey to survey, probably due to labor costs and shifting/switching from manual to machine picking and vice versa. In 2015/16, the average cost of picking/harvesting was 25 cts/kg of lint produced. The data for the last four surveys showed that cost of ginning has fluctuated in a range between 16 and 20 cts/kg lint, with a middle value in 2015/16. The opportunity cost for ginning from most countries that do not have custom ginning is included in the data for calculating the average cost.

Seed Value after Ginning

In some countries, farmers pay for ginning and own the lint and seed, a system that is known as custom ginning. Even if

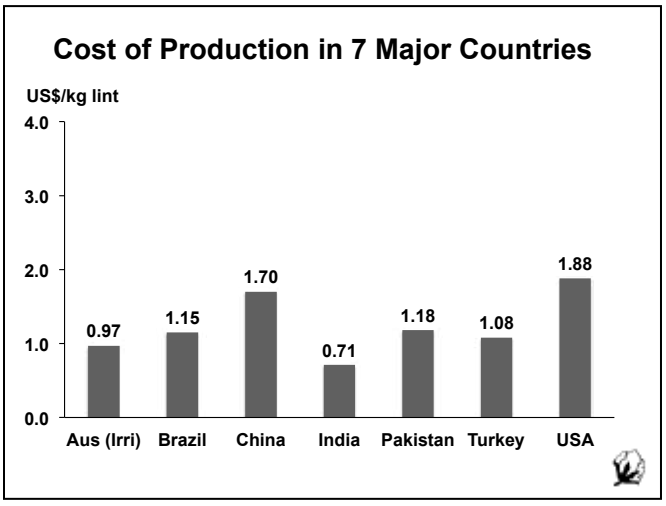


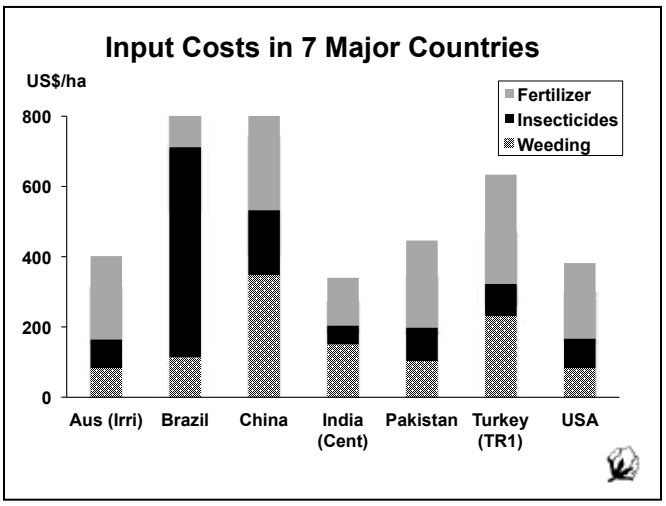
custom ginning is not popular in a country, a farmer selling seedcotton is receiving an implicit price for lint and seed, although these prices are not separately identified. The value of seed after ginning is substantial in many countries and was deducted from the total cost in order to determine the net cost per kilogram of lint reported here. Thus, the value of seed has a significant impact on the net cost of production.

Among the surveys conducted in the last 15 years (every three years), the highest value of seed was 30 cents in 2000/01. The value of seed averaged 22 cts/kg in 2012/13, increasing to 34 cts/kg in 2015/16. The seed value proved to be a significant factor in lowering the net cost of production of lint in 2015/16.

Cost of Production in Seven Major Countries

None of the Central Asian countries participated in the survey. The data for the seven other major producing countries show that it is most expensive to produce cotton in the United States, followed by China. India is the least expensive country in which to produce cotton, and was the world's largest cotton producer in 2015/16. The cost of insect control in Brazil is not only the highest in the world, but also many times the cost of insect control in the seven major countries compared. Fertilizer costs are highest in China, particularly in the Xinjiang region. In China, cotton is over-fertilized and topping is required to control excessive vegetative growth. Among the seven major producing countries included in the survey, weeding is most expensive in China, due to manual weeding in the Yellow and Yangtze River Valleys. Not only does China have one of the highest costs of production, but it also uses much more labor than the United States or Brazil. This has contributed to the decline in cotton production, which fell by 35% from 7.3 million tons in 2012/13 to 4.8 million tons in 2015/16.





Note: The full report on *Cost of Production of Raw Cotton*, which was published in October 2016, containing detailed data from 31 countries, can be ordered on https://www.icac.org/login?url=%2Fpubdetail.php%3Fid%3DPUB0000048

2016/17 SUPPLY AND USE OF COTTON BY COUNTRY February 1, 2017

	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	0	0		0	0.11	0.11
CUBA	4	269	1	1	2	3		1	0.19	0.19
DOM. REP.					1	1		0	0.47	0.47
MEXICO	95	1,559	148	161	298	418	28	161	0.36	0.38
USA	3,854	958	3,692	1,049	2	718	2,710	1,315	0.38	1.83
N. America	**3,958**	**971**	**3,843**	**1,211**	**304**	**1,142**	**2,738**	**1,478**	**0.38**	**1.29**
EL SALVADOR				10	35	35		10	0.28	0.28
GUATEMALA				7	24	24		7	0.29	0.29
HONDURAS	0	318	0	0		0		0		
C. America	**2**	**512**	**1**	**17**	**59**	**60**	**0**	**17**	**0.28**	**0.28**
ARGENTINA	300	522	157	312	3	141	60	271	1.35	1.92
BOLIVIA	4	639	3	2	0	3	0	2	0.50	0.53
BRAZIL	905	1,568	1,419	795	19	697	657	880	0.65	1.26
CHILE				0	0	0		0	0.12	0.12
COLOMBIA	26	816	21	14	35	56		14	0.25	0.25
ECUADOR	1	439	1	1	13	13		1	0.10	0.10
PARAGUAY	12	417	5	3	1	2	4	2	0.33	0.96
PERU	27	814	22	16	39	61	1	16	0.26	0.27
URUGUAY				0		0		0	0.06	0.06
VENEZUELA	15	390	6	4	4	10		3	0.30	0.30
S. America	**1,290**	**1,266**	**1,633**	**1,148**	**114**	**984**	**722**	**1,189**	**0.70**	**1.21**
ALGERIA				1	6	6		1	0.13	0.13
EGYPT	55	858	47	75	99	125	28	67	0.44	0.54
MOROCCO				4	15	15		4	0.24	0.24
SUDAN	49	487	24	20		18	13	13	0.41	0.72
TUNISIA				3	12	12		3	0.22	0.22
N. Africa	**104**	**683**	**71**	**101**	**132**	**175**	**42**	**87**	**0.40**	**0.50**
BENIN	392	385	151	58		4	137	68	0.48	16.96
BURKINA FASO	740	385	285	122		4	261	143	0.54	35.63
CAMEROON	224	462	103	69		2	116	54	0.46	28.32
CENT. AFR. REP.	35	231	8	3			8	3	0.40	
CHAD	298	239	71	23		1	59	35	0.59	70.00
COTE D'IVOIRE	345	432	149	53		2	141	60	0.42	28.93
GUINEA	12	276	3	1			3	1	0.40	
MADAGASCAR				3				3		
MALI	656	398	261	104		3	247	115	0.46	38.27
NIGER	5	447	2	0		1	1	0	0.11	0.25
SENEGAL	20	385	8	3		1	7	3	0.35	3.50
TOGO	133	241	32	11			31	11	0.36	
F. Africa	**2,859**	**375**	**1,073**	**450**		**17**	**1,011**	**496**	**0.48**	**28.81**
ANGOLA	3	302	1	0		1	0	0	0.33	0.48
ETHIOPIA	69	560	39	19	13	51	0	19	0.36	0.36
GHANA	12	365	4	1		1	3	1	0.33	1.11
KENYA	21	181	4	1	0	4		1	0.17	0.17
MALAWI	134	240	32	22		3	29	23	0.72	7.61
MOZAMBIQUE	110	208	23	16			25	14	0.54	
NIGERIA	253	202	51	22	1	25	31	18	0.32	0.71
SOUTH AFRICA	9	1,195	10	9	17	20	7	9	0.35	0.48
TANZANIA	315	217	68	87		39	53	64	0.69	1.63
UGANDA	66	284	19	21		0	30	10	0.34	23.10
CONGO, DR				2	8	8		2	0.27	0.27
ZAMBIA	122	325	40	39		2	40	37	0.91	
ZIMBABWE	202	180	36	3		3	20	17	0.72	5.93
S. Africa	**1,337**	**248**	**331**	**249**	**59**	**181**	**238**	**220**	**0.53**	**1.22**
KAZAKHSTAN	109	529	58	16	0	14	44	16	0.27	1.13
KYRGYZSTAN	14	810	12	4	4	1	14	4	0.27	4.19
TAJIKISTAN	165	485	80	27		9	71	27	0.34	2.88
TURKMENISTAN	545	538	293	114		142	151	114	0.39	0.81
UZBEKISTAN	1,250	618	772	221	1	329	428	237	0.31	0.72
C. Asia	**2,083**	**583**	**1,215**	**382**	**5**	**495**	**708**	**398**	**1.58**	**0.80**

2016/17 SUPPLY & USE OF COTTON BY COUNTRY (cont'd) February 1, 2017

	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	4	3	1	0	0.12	0.15
AZERBAIJAN	33	763	25	10		16	6	14	0.65	0.89
BELARUS				4	11	11		4	0.34	0.34
BELGIUM				2	10	7	4	2	0.17	0.27
BULGARIA	1	324	0	1	5	5	0	1	0.18	0.19
CZECH REP.				0	3	3		0	0.13	0.13
DENMARK					0	0				
ESTONIA										
FINLAND										
FRANCE				2	13	10	3	2	0.14	0.19
GERMANY				9	44	38	6	9	0.21	0.24
GREECE	211	1,009	213	44	5	20	198	44	0.20	2.18
HUNGARY				0	1		1	0	0.03	
IRELAND				0	0	0		0	0.09	0.09
ITALY				7	39	36	3	7	0.17	0.18
LATVIA				0	0	0	0	0	0.03	0.04
LITHUANIA				0				0		
MOLDOVA				1	2	2		1	0.34	0.34
NETHERLANDS				0	4	4		0	0.10	
NORWAY										
POLAND				0	3	3		0	0.12	0.12
PORTUGAL				7	38	37	0	7	0.19	0.19
ROMANIA				0	0	0		0	0.09	0.09
RUSSIA	1	520	1	13	62	62	0	13	0.21	0.21
SLOVAK REP.										
SPAIN	66	873	58	10	3	5	53	12	0.21	2.52
SWEDEN				0	0	0		0	0.74	0.74
SWITZERLAND				0	3	3	0	0	0.10	0.10
UKRAINE				0	2	2		0	0.25	0.25
UNITED KINGDOM				0	0	0		0	0.14	0.14
FORMER YUGOSLAVIA				1	7	7		1	0.19	0.19
Europe	**313**	**947**	**297**	**114**	**262**	**278**	**275**	**120**	**0.22**	**0.43**
Including EU-28	**278**	**974**	**271**	**83**	**174**	**173**	**269**	**86**	**0.19**	**0.49**
CHINA	2,846	1,665	4,737	11,160	983	7,591	21	9,269	1.22	1.22
TAIWAN				41	132	132		41	0.31	0.31
HONG KONG				33	0		1	33	41.48	
Sub total	**2,846**	**1,665**	**4,737**	**11,234**	**1,116**	**7,723**	**22**	**9,343**	**1.21**	**1.21**
AUSTRALIA	520	1,970	1,024	185	0	7	849	353	0.41	52.80
INDONESIA	8	615	5	74	671	641		108	0.17	0.17
JAPAN				16	65	65		16	0.24	0.24
KOREA, D.R.				1	5	5		1	0.24	0.24
KOREA, REP.				54	242	242	1	53	0.22	0.22
MALAYSIA				30	92	62	15	44	0.56	0.70
PHILIPPINES	0	567	0	3	10	10		3	0.28	0.28
SINGAPORE				0	7		7	0	0.05	
THAILAND	2	517	1	46	268	269		46	0.17	0.17
VIETNAM	5	460	2	151	1,190	1,137		205	0.18	0.18
E. Asia	**554**	**1,878**	**1,040**	**561**	**2,550**	**2,448**	**872**	**831**	**0.25**	**0.34**
AFGHANISTAN	40	387	16	5		4	13	3	0.19	0.78
BANGLADESH	40	708	28	372	1,397	1,403		394	0.28	0.28
INDIA	10,500	560	5,885	2,000	250	5,086	942	2,107	0.35	0.41
MYANMAR	244	634	155	104	10	207		62	0.30	0.30
PAKISTAN	2,525	699	1,765	541	535	2,267	33	541	0.24	0.24
SRI LANKA				0	2	2		0	0.11	0.11
S. Asia	**13,352**	**588**	**7,850**	**3,022**	**2,195**	**8,971**	**989**	**3,108**	**0.31**	**0.35**
IRAN	70	824	58	30	52	110		30	0.27	0.27
IRAQ	13	361	5	2	4	9		2	0.21	0.21
ISRAEL	8	1,761	14	2			14	2	0.13	
SYRIA	35	983	35	22		24	21	12	0.27	0.50
TURKEY	415	1,555	645	700	895	1,450	106	684	0.44	0.47
Sub total	**544**	**1,392**	**757**	**760**	**961**	**1,605**	**141**	**732**	**0.42**	**0.46**
WORLD TOTAL	**29,243**	**781**	**22,849**	**19,249**	**7,757**	**24,080**	**7,757**	**18,019**	**0.75**	**0.75**

*/ Ending stocks divided by consumption plus exports.

**/ Ending stocks divided by consumption.

Subtotals and total include countries not shown.

2017/18 SUPPLY AND USE OF COTTON BY COUNTRY February 1, 2017

	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	0	0		0	0.12	0.12
CUBA	4	269	1	1	2	3		1	0.19	0.19
DOM. REP.					1	1		0	0.47	0.47
MEXICO	98	1,559	153	161	291	418	28	158	0.35	0.38
USA	4,239	935	3,964	1,315	2	718	3,169	1,395	0.36	1.94
N. America	**4,346**	**948**	**4,119**	**1,478**	**296**	**1,142**	**3,197**	**1,554**	**0.36**	**1.36**
EL SALVADOR				10	35	35		10	0.28	0.28
GUATEMALA				7	24	24		7	0.29	0.29
HONDURAS	0	318	0	0		0		0		
C. America	**2**	**512**	**1**	**17**	**59**	**60**	**0**	**17**	**0.28**	**0.28**
ARGENTINA	297	522	155	271	3	141	45	243	1.30	1.72
BOLIVIA	4	639	3	2	1	3	0	2	0.50	0.53
BRAZIL	887	1,506	1,336	880	19	676	679	880	0.65	1.30
CHILE				0	0	0		0	0.12	0.12
COLOMBIA	25	816	20	14	36	56		14	0.25	0.25
ECUADOR	1	439	1	1	13	13		2	0.15	0.15
PARAGUAY	12	413	5	2	1	2	4	2	0.38	1.01
PERU	26	814	22	16	40	61	1	16	0.26	0.27
URUGUAY				0	0	0		0	0.06	0.06
VENEZUELA	14	390	6	3	5	11		3	0.30	0.30
S. America	**1,267**	**1,220**	**1,547**	**1,189**	**117**	**963**	**729**	**1,161**	**0.69**	**1.21**
ALGERIA				1	6	6		1	0.13	0.13
EGYPT	58	797	46	67	117	126	37	67	0.41	0.53
MOROCCO				4	15	15		4	0.24	0.24
SUDAN	50	487	25	13		18	7	13	0.52	0.71
TUNISIA				3	12	12		3	0.22	0.22
N. Africa	**108**	**652**	**71**	**87**	**150**	**177**	**44**	**87**	**0.40**	**0.49**
BENIN	403	373	150	68		4	147	68	0.45	16.93
BURKINA FASO	777	405	315	143		4	312	142	0.45	35.46
CAMEROON	230	487	112	54		2	114	50	0.44	26.56
CENT. AFR. REP.	36	230	8	3			8	4	0.48	
CHAD	313	206	64	35		1	70	28	0.40	56.84
COTE D'IVOIRE	362	455	165	60		2	148	74	0.49	35.95
GUINEA	12	273	3	1			3	1	0.40	
MADAGASCAR				3				3		
MALI	689	392	270	115		3	260	121	0.46	40.49
NIGER	5	447	2	0		1	1	0	0.11	0.25
SENEGAL	21	376	8	3		1	6	4	0.50	4.61
TOGO	140	290	41	11			36	16	0.46	
F. Africa	**2,988**	**381**	**1,139**	**496**		**17**	**1,105**	**512**	**0.46**	**29.79**
ANGOLA	3	301	1	0		1	0	0	0.33	0.48
ETHIOPIA	71	498	35	19	18	53	0	19	0.35	0.35
GHANA	12	365	4	1		1	3	1	0.33	1.11
KENYA	20	183	4	1	2	4	1	2	0.30	0.36
MALAWI	132	252	33	23		3	33	20	0.54	6.54
MOZAMBIQUE	108	202	22	14			23	13	0.56	
NIGERIA	261	204	53	18	1	24	28	20	0.38	0.84
SOUTH AFRICA	9	1,195	10	9	17	20	7	9	0.35	0.47
TANZANIA	309	218	67	64		40	35	56	0.75	1.40
UGANDA	66	292	19	10		0	20	8	0.41	19.43
CONGO, DR				2	7	7		2	0.30	0.30
ZAMBIA	119	337	40	37		2	40	36	0.88	
ZIMBABWE	198	175	35	17		3	33	16	0.43	5.52
S. Africa	**1,328**	**247**	**328**	**220**	**65**	**181**	**225**	**207**	**0.51**	**1.15**
KAZAKHSTAN	110	529	58	16	0	14	45	16	0.27	1.12
KYRGYZSTAN	14	810	11	4	3	1	13	4	0.28	4.19
TAJIKISTAN	168	538	91	27		10	80	27	0.30	2.72
TURKMENISTAN	545	533	290	114		142	148	114	0.39	0.81
UZBEKISTAN	1,213	618	749	237	1	332	418	237	0.32	0.71
C. Asia	**2,050**	**585**	**1,200**	**398**	**4**	**499**	**704**	**398**	**1.56**	**0.80**

2017/18 SUPPLY & USE OF COTTON BY COUNTRY (cont'd) February 1, 2017

	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	3	3		0	0.16	0.16
AZERBAIJAN	33	767	25	14		15	2	22	1.34	1.48
BELARUS				4	11	11		4	0.34	0.34
BELGIUM				2	10	6	4	2	0.17	0.28
BULGARIA	1	324	0	1	5	5	0	1	0.18	0.19
CZECH REP.				0	2	2		0	0.09	0.09
DENMARK					0	0			0.12	
ESTONIA										
FINLAND										
FRANCE				2	11	9	2	2	0.16	0.20
GERMANY				9	40	36	4	9	0.23	0.25
GREECE	222	1,028	228	44	5	20	209	48	0.21	2.43
HUNGARY				0				0		
IRELAND				0	0	0		0	0.10	0.10
ITALY				7	38	35	3	7	0.17	0.19
LATVIA				0	0	0	0	0	0.03	0.04
LITHUANIA				0				0		
MOLDOVA				1	2	2		1	0.34	0.34
NETHERLANDS				0	4	4		0	0.11	
NORWAY										
POLAND				0	3	3		0	0.12	0.12
PORTUGAL				7	34	35		5	0.15	0.15
ROMANIA				0	0	0		0	0.09	0.09
RUSSIA	1	520	1	13	62	62	0	14	0.22	0.22
SLOVAK REP.										
SPAIN	68	876	59	12	3	5	58	12	0.20	2.59
SWEDEN				0	0	0		0		
SWITZERLAND				0	3	3	0	0	0.10	0.11
UKRAINE				0	2	2		0	0.26	0.26
UNITED KINGDOM				0	0	0		0	0.13	0.13
FORMER YUGOSLAVIA				1	7	7		1	0.19	0.19
Europe	**326**	**963**	**314**	**120**	**249**	**269**	**282**	**132**	**0.24**	**0.49**
Including EU-28	**291**	**990**	**288**	**86**	**161**	**166**	**280**	**88**	**0.20**	**0.53**
CHINA	2,931	1,640	4,806	9,269	1,131	7,591	22	7,594	1.00	1.00
TAIWAN				41	128	128		41	0.32	0.32
HONG KONG				33	0		1	32	38.91	
Sub total	**2,931**	**1,640**	**4,806**	**9,343**	**1,260**	**7,719**	**22**	**7,668**	**0.99**	**0.99**
AUSTRALIA	515	1,980	1,019	353	0	6	809	557	0.68	87.66
INDONESIA	8	615	5	108	676	648		141	0.22	0.22
JAPAN				16	63	65		14	0.22	0.22
KOREA, D.R.				1	5	5		1	0.24	0.24
KOREA, REP.				53	240	240		53	0.22	0.22
MALAYSIA				44	93	86	8	44	0.47	0.51
PHILIPPINES	0	567	0	3	10	10		3	0.30	0.30
SINGAPORE				0	6		6	0	0.05	
THAILAND	2	517	1	46	263	264		46	0.17	0.17
VIETNAM	5	465	2	205	1,287	1,217		277	0.23	0.23
E. Asia	**547**	**1,891**	**1,034**	**831**	**2,643**	**2,547**	**823**	**1,139**	**0.34**	**0.45**
AFGHANISTAN	38	387	15	3		4	11	3	0.16	0.60
BANGLADESH	41	712	29	394	1,473	1,474		422	0.29	0.29
INDIA	11,235	530	5,957	2,107	250	5,111	875	2,328	0.39	0.46
MYANMAR	249	634	158	62	57	207		69	0.34	0.34
PAKISTAN	2,601	739	1,923	541	530	2,278	33	682	0.30	0.30
SRI LANKA				0	2	2		0	0.11	0.11
S. Asia	**14,167**	**571**	**8,083**	**3,108**	**2,312**	**9,078**	**920**	**3,505**	**0.35**	**0.39**
IRAN	72	737	53	30	60	113		30	0.26	0.26
IRAQ	10	361	3	2	5	8		2	0.24	0.24
ISRAEL	8	1,892	15	2			15	2	0.12	
SYRIA	25	954	23	12		22	4	10	0.37	0.43
TURKEY	427	1,532	655	684	945	1,479	107	698	0.44	0.47
Sub total	**545**	**1,379**	**751**	**732**	**1,019**	**1,634**	**125**	**744**	**0.42**	**0.46**
WORLD TOTAL	**30,605**	**764**	**23,393**	**18,019**	**8,175**	**24,286**	**8,175**	**17,125**	**0.71**	**0.71**

*/ 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

February 1, 2017

Seasons begin on August 1

	2012/13	2013/14 Est.	2014/15 Est.	2015/16 Est.	2016/17 Proj.	2017/18 Proj.
	Million Metric Tons					
BEGINNING STOCKS						
WORLD TOTAL	**15.363**	**18.500**	**20.596**	**22.324**	**19.25**	**18.02**
CHINA	6.181	9.607	12.109	12.917	11.16	9.27
USA	0.729	0.903	0.651	0.980	1.05	1.32
PRODUCTION						
WORLD TOTAL	**26.777**	**26.170**	**26.197**	**21.074**	**22.85**	**23.39**
INDIA	6.290	6.766	6.562	5.746	5.88	5.96
CHINA	7.300	6.950	6.500	4.753	4.74	4.81
USA	3.770	2.811	3.553	2.806	3.69	3.96
PAKISTAN	2.002	2.076	2.305	1.514	1.77	1.92
BRAZIL	1.310	1.734	1.563	1.289	1.42	1.34
UZBEKISTAN	1.000	0.910	0.885	0.832	0.77	0.75
OTHERS	5.105	4.924	4.829	4.134	4.58	4.66
CONSUMPTION						
WORLD TOTAL	**23.780**	**24.004**	**24.445**	**24.131**	**24.08**	**24.29**
CHINA	8.290	7.517	7.479	7.442	7.59	7.59
INDIA	4.731	5.057	5.261	5.243	5.09	5.11
PAKISTAN	2.216	2.470	2.492	2.256	2.27	2.28
EUROPE & TURKEY	1.560	1.611	1.692	1.687	1.63	1.66
BANGLADESH	1.023	1.146	1.204	1.324	1.40	1.47
VIETNAM	0.492	0.673	0.875	1.007	1.14	1.22
USA	0.762	0.773	0.778	0.751	0.72	0.72
BRAZIL	0.910	0.862	0.797	0.733	0.70	0.68
OTHERS	3.795	3.895	3.866	3.689	3.55	3.57
EXPORTS						
WORLD TOTAL	**10.061**	**9.005**	**7.803**	**7.553**	**7.76**	**8.17**
USA	2.836	2.293	2.449	1.993	2.71	3.17
INDIA	1.685	2.014	0.914	1.255	0.94	0.87
CFA ZONE	0.828	0.973	0.893	0.989	1.01	1.10
BRAZIL	0.938	0.485	0.851	0.939	0.66	0.68
UZBEKISTAN	0.690	0.615	0.550	0.543	0.43	0.42
AUSTRALIA	1.343	1.057	0.520	0.616	0.85	0.81
IMPORTS						
WORLD TOTAL	**10.201**	**8.935**	**7.781**	**7.540**	**7.76**	**8.17**
BANGLADESH	1.044	1.190	1.177	1.355	1.40	1.47
VIETNAM	0.517	0.687	0.934	1.001	1.19	1.29
CHINA	4.426	3.075	1.804	0.959	0.98	1.13
TURKEY	0.803	0.924	0.800	0.918	0.89	0.95
INDONESIA	0.686	0.651	0.728	0.640	0.67	0.68
TRADE IMBALANCE 1/	**0.140**	**-0.070**	**-0.022**	**-0.013**	**0.00**	**0.00**
STOCKS ADJUSTMENT 2/	**0.001**	**0.000**	**-0.002**	**-0.005**	**0.00**	**0.00**
ENDING STOCKS						
WORLD TOTAL	**18.500**	**20.596**	**22.324**	**19.249**	**18.02**	**17.13**
CHINA	9.607	12.109	12.917	11.160	9.27	7.59
USA	0.903	0.651	0.980	1.049	1.32	1.39
ENDING STOCKS/MILL USE (%)						
WORLD-LESS-CHINA 3/	**57**	**51**	**55**	**48**	**53**	**57**
CHINA 4/	**116**	**161**	**173**	**150**	**122**	**100**
COTLOOK A INDEX 5/	**88**	**91**	**71**	**70**		

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.