



Recent trends and prospects in the world cotton market and policy developments

The cotton sector contributes significantly to the economies of a number of developing countries, as well as to the livelihoods of millions of rural smallholders worldwide. In 2019, world production of cotton was valued at about USD 46 billion, while global trade reached USD 15 billion. Moreover, the cotton industry employs an estimated 150 million people across 75 countries, making the cotton sector an important contributor to the achievements of the 2030 Agenda for Sustainable Development. Understanding the drivers of the cotton market and identifying the challenges and opportunities that lie ahead is key, given the socio-economic significance of the sector.

Demand for cotton depends on the demand for textiles. Textiles utilisation has increased steadily driven by population and income growth mostly in developing countries, particularly in Asia. In addition, demand for natural fibres has expanded quite markedly in recent years, sustained by a growing trend for sustainable products. Despite this, the cotton share in global textile fibre consumption continues to hover around 27 percent, after accounting for close to 60 percent between the 1960s and 1970s, due to robust demand for man-made fibres, most notably polyester fibres.

Cotton faces a number of uncertainties on both the production and demand sides that need to be properly addressed in order for the sector to realize its full potential

in supporting economic growth and development. There is mounting evidence of the impact of cotton production on the sustainable use of land, water and ecosystems. Strategies to address these negative externalities are taking place in the face of declining land and water resources in many parts of the world. While it is clear that the expansion in cotton supply will have to come from productivity gains at the farm level, it is equally important that gains are realized throughout the various stages of the value chain. Low farm productivity, particularly in the cotton producing countries in West Africa, the so-called Cotton-4 (or C-4) countries (Benin, Burkina Faso, Chad and Mali), constitutes another major challenge that requires particular attention. The price-cost squeeze that the textiles and manufacturers face because of stagnant retail prices and rising production costs must also be overcome. Cotton value chain actors have limited alternatives but to adapt to these economic realities.

The mobilisation of innovative technologies and resources is vital to ensure that the sector remains viable and becomes more resilient and sustainable. As FAO Director-General QU Dongyu highlighted during the World Cotton Day event held at the WTO headquarters in October 2019, it is critical that the sector meets the highest standards of sustainability at all stages of the value chain. It is time to do things differently: to explore innovative approaches and new ideas aimed at pro-poor outcomes.

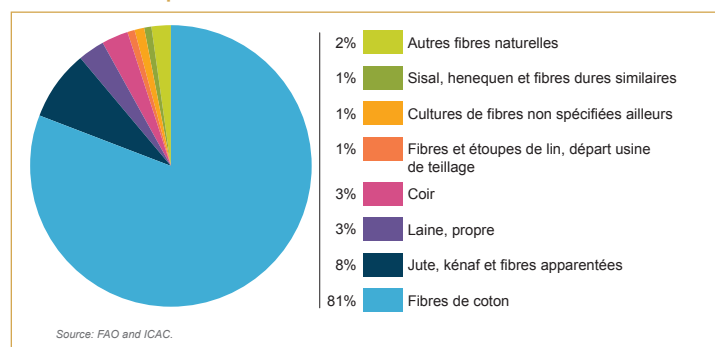
1. The world fibre market

World production of all fibres equalled about 110 million tonnes in 2018, including 32 million tonnes of natural fibres and 79 million tonnes of chemical fibres, both cellulosic (fibres made from the cellulose contained in the pulp of wood, bamboo and other sources) and non-cellulosic

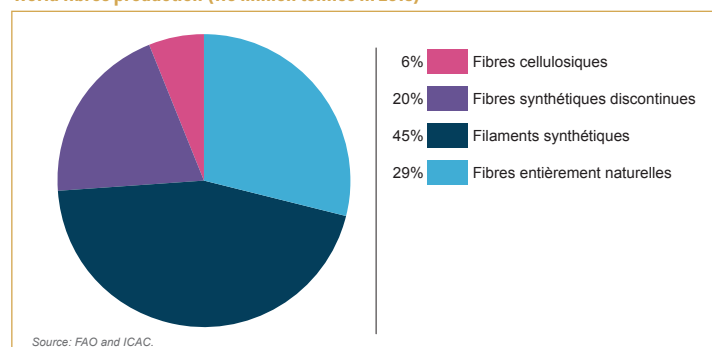
(fibres made from petroleum molecules). The man-made fibre complex accounted for 70 percent of total fibre production in 2018.

The average annual rate of growth in world production over the past seven decades was 2.5 percent, or about 290 000 tonnes. Cotton is the most important of the natural

World natural fibre production (32 million tonnes in 2018)



World fibres production (110 million tonnes in 2018)

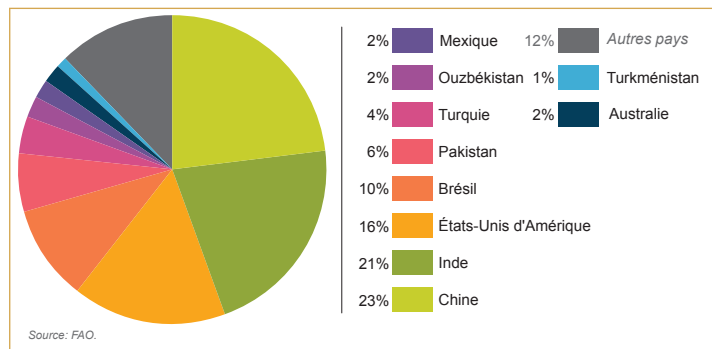


fibres due to its rapid growth rate and wide range of applications. About 80 percent of cotton is used in apparel, with denim being the single largest end-use category, accounting for nearly one-fifth of all cotton use. About 15 percent of world cotton use is in home furnishings, especially sheets and towels, and the remaining 5 percent accounts for a variety of mostly non-woven applications, such as filters and padding.

Areas in the world where cotton is produced have fluctuated since the 1950s from between 28 million hectares (ha) and 36 million ha, averaging about 33 million ha. The significant reduction in cotton areas in the United States of America, Central Asia and North Africa since the 1950s has been offset by an increase in West Africa, China, India and Pakistan. With no total area increase, the growth in world cotton production since the 1950s has been the result of higher yields linked to improved technologies.

The largest cotton producing countries in 2018/19 were China and India, accounting for about one-quarter of the world total, respectively. Together, Brazil and the United States of America accounted for about one-quarter of production, while Pakistan and Turkey as a whole represented about one-tenth of the total. The remaining 60 countries all together produced about one-fifth of the world total. The world cotton yield has displayed an upward trend since the 1950s. However, the pace of technology development and adoption slowed down after 2007/08, and the world yield in 2018/19 was still nearly 800 kg/ha.

World Cotton Production (2018/19)



World cotton mill use returned to 26.7 million tonnes in 2018/19, equal to the level achieved in 2007/08. The weakening of retail sales during the recession of 2008-2009, followed by the spike in cotton prices during 2010/11, had caused world mill use to drop to 22 million tonnes during 2011/12. In response to the market disruptions caused by the global recession, the Government of China began stockpiling cotton in a state reserve in 2011/12. Ending stocks in China rose from 2 million tonnes in July 2011 to 14 million tonnes in July 2015. Purchases for the reserve ended in 2015, resulting in more availability of cotton for market use. Three consecutive years of growth in cotton consumption beginning in 2016/17 finally completed a recovery from the recession and its aftermath.

In nominal terms, the Cotlook A Index, which represents an indicator of average world prices for cotton in US cents/

lb delivered to East Asian ports, fluctuated between US 40 cents/lb (USD 880/tonne) and US 95 cents/lb (USD 2 090/tonne) from the early 1970s until 2018/19. The only statistically significant upward or downward trend in nominal cotton prices was during 2010/11 and 2011/12, when cotton prices briefly exceeded USD 2/lb due to disruptions in the cotton-textile-apparel supply chain caused by the 2008-2009 world recession. During the recession, all actors in the supply chain reduced their inventories for fear of an even steeper and longer reduction in demand than before. When consumer demand began to recover in early 2010, panic buying resulted in a short-lived but extraordinary spike in cotton prices.

World cotton production is increasingly disaggregated due to a growing number of programmes to collect data, encourage improvements or assure consumers of responsible production practices. Some of these programmes are organized by producers in a particular country, some are sponsored by input suppliers, and some are multinational initiatives facilitated by the private sector and governments. Since cotton is increasingly identified in marketing channels by the programme under which it was produced, it goes under the name: 'identity cottons'. There are four major identity cottons, accounting for 19 percent of world cotton production: 1) Certified organic, 2) Fairtrade, 3) Cotton made in Africa (CmiA) and 4) Better Cotton Initiative (BCI).

2. Markets and policy developments in major cotton producing and consuming countries

The national yield in China rose an extraordinary 210 kg to 1 800 kg of lint/ha between 2016/17 and 2018/19, and represented the third highest in the world during that three-year period. As a result, production in China rose to 6 million tonnes in 2018/19, the highest in the world. Mill use and cotton output in China has been shifting to the western part of the country, dominated by increased mechanization and higher yields.

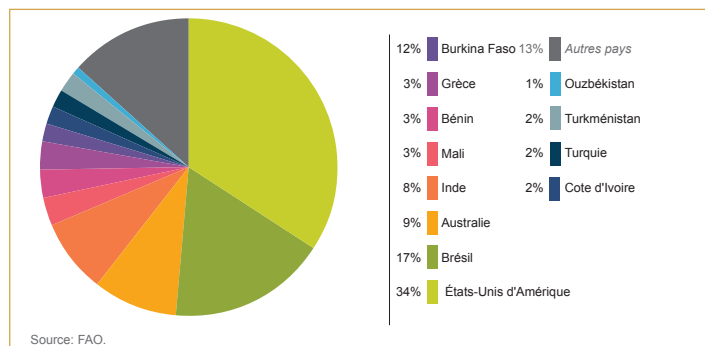
Cotton planted areas and production in Viet Nam are relatively limited. However, mill use rose by 1.1 million tonnes to 1.6 million between 2011/12 and 2018/19, and Viet Nam became the fifth largest consumer of cotton in the world, after China, India, Pakistan and Bangladesh. One of the main reasons for this development is the fact that Viet Nam has free trade agreements with China and the Republic of Korea, and investments from both countries are increasing. Like in Viet Nam, mill use of cotton in Bangladesh has grown exponentially since the early 1990s. However, Viet Nam and Bangladesh differ on one key aspect: Bangladesh has developed an integrated domestic supply chain from spinning to garment assembly, while Viet Nam is highly integrated with China.

Cotton mill use in the United States of America has been stable, averaging 700 000 and 800 000 tonnes since 2008/09 and represents the eighth largest cotton spinning industry in the world. It should be noted that approximately 90 percent of this quantity spun in the United States of

America is exported to countries in Central America and the Caribbean for weaving, knitting, finishing and apparel assembly. Finished products are then imported into the United States of America at preferential duty rates under the Central American Free Trade Agreement. With regard to trade, the United States of America has remained the largest cotton exporter by a wide margin, with exports of 3.5 million tonnes during 2017/18, representing an increase of 200 000 tonnes over the previous season and the highest since 2005/06. US cotton exports accounted for 38 percent of world cotton trade during 2017/18.

In Mexico, falling prices for maize have resulted in greater areas devoted to cotton. Likewise, cotton area in Brazil has expanded at the expense of maize, turning the country into the world's fourth largest cotton producer, with production reaching 2.6 million tonnes in 2018/19.

Cotton export shares (2018/19)



Cotton output in India has also expanded, and remains heavily influenced by changes in the Minimum Support Prices (MSPs) established by the national government each year. Mill use of cotton in India also increased, which allows India to become the second largest consumer of cotton in the world after China.

Elsewhere, cotton areas and yields in Australia vary from year to year according to water availability, while production in Pakistan is vulnerable to diseases and insects. Nevertheless, Pakistan is still the world's fifth largest cotton producer and has the third largest cotton spinning industry in the world after China and India. Similar to Viet Nam, Pakistan benefits from substantial investments in infrastructure and textile activity from China.

In Turkey, cotton production has shifted to the Southeastern Anatolia Project, and the region now accounts for about two-thirds of cotton output in the country. Turkey has the sixth largest cotton textile industry in the world, with the bulk of the exports geared towards Europe. On the other hand, production in Central Asia has been trending downwards since the beginning of the 1990s, due to declining harvested areas caused by soil salinization, particularly in Uzbekistan, the main cotton producer in the region.

In the European Union, the long-run trend in cotton production is negative. Reduced government support for the cotton sector, together with a partial decoupling of

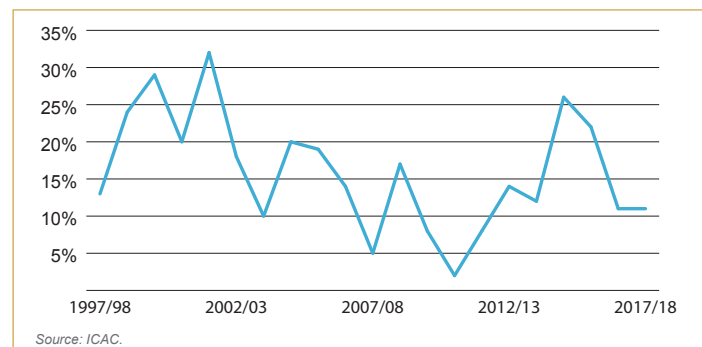
support from current production and the rising wages and alternative employment opportunities outside agriculture, are leading to reductions in cotton areas and production. Overall, mill use has also declined. The two largest cotton spinning industries in the European Union are Italy and Portugal, followed by Germany and Greece. Growth in the demand for textile products has declined as a result of the limited increase in GDP per capita and population growth that has had a negative impact on mill use.

Production in Egypt and the Sudan more than doubled between 2016/17 and 2018/19. Agriculture is irrigated in both countries and temperatures are extremely uniform. Production in North Africa has been on a long downward trajectory for decades; however, the long slide may be over. Mill use of cotton in Egypt is nearly double the amount of production and it continues to export extra-fine cotton.

Cotton production and export in Francophone Africa (Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Guinea, Madagascar, Mali, Niger, Senegal and Togo) rose rather significantly over the last couple of years, with area expansion, rather than yields, underpinning production growth. However, mill use accounts for only 2 percent of production. Outside the Francophone area, cotton production in sub-Saharan Africa has been stable over the previous two decades, mostly constrained by low yields.

Many countries have implemented policies and programmes that affect cotton production, including direct payments to producers to support incomes and government purchases of cotton and buffer stocks to stabilize prices and guarantee domestic supplies. Furthermore, subsidized premiums for insurance products to protect farm income during seasons of adversity, barriers to cotton imports to protect domestic industries and input subsidies to raise yields and lower production costs, are among some of the other policy instruments used by governments. The aggregate cost of government support for cotton production paid by countries around the world ranged from USD 4.4 billion to USD 7.4 billion in 2015/16, 2016/17 and 2017/18. The government measures taken include direct support paid to producers, border protection, crop insurance subsidies and price support mechanisms.

Subsidies as a percentage of the value of world cotton production



3. Changes in demand for textile products

The world market for textile products (yarn and fabric) was estimated at about USD 850 billion at manufacturer's prices in 2019, growing at around 5 percent by value annually, and accounting for about 1 percent of world GDP. Around 84 percent of the value of textile products consists of fabrics, while yarns account for 16 percent. Some 60 percent of total textile production by value occurs in the Asia-Pacific region, 19 percent in Europe, and 11 percent in the United States of America.

For decades it was possible to forecast world mill use on the basis of GDP growth, population growth and prices of cotton relative to competing fibre prices, particularly polyester. In overall terms, world cotton mill use rose on average by about 2 percent per year. Since world population growth from year-to-year is relatively stable, most of the annual variation in cotton mill use was attributed to the change in the pace of world economic growth and fluctuations in prices of cotton relative to the prices of polyester.

Two main reasons could be identified that explain the stagnation in world cotton mill use, despite growth in incomes and population: i) above-average prices of cotton and ii) a change in relative fibre prices, with polyester becoming much cheaper than cotton.

Textile and apparel manufacturing are among the most competitive industries in the world, characterized by high volumes and small margins, with bankruptcy or profitability determined by small differences in efficiency.

Financial pressures on manufacturers are intensifying as consumers become increasingly concerned about sustainability issues, including the environmental and social impacts of production activities. Therefore, although profit margins are small, textile and apparel producers are being pressured to invest in equipment, processes and employee training that would reduce resource use as well as environmental impacts, in addition to improving wages and working conditions.

The resulting financial stress in textile and apparel production is leading to industry consolidation. As of 2018, three countries accounted for 60 percent of world cotton

mill use: China, India and Pakistan. Between 2011/12, when world mill use fell to 22.4 million tonnes, and 2018/19, when mill use recovered to 26.7 million tonnes, the entire growth of 4.3 million tonnes occurred in just eight countries: Bangladesh, China, India, Indonesia, Pakistan, Turkey, Viet Nam and Uzbekistan. In all other countries, cotton use either remained unchanged or actually declined, even while the world total was rising.

Consolidation is occurring not just among countries, but also among companies. There are no comprehensive statistics on average textile mill size around the world, but in the 1980s, a typical spinning mill running 100 percent cotton and producing yarn for sale to weaving mills produced about 3 000 tonnes of yarn per year. Today, a typical spinning/weaving/dyeing and finishing operation will account for about 20 000 tonnes of fibre per year, including blends of cotton and man-made fibres. Some companies are much larger than average and use more than 100 000 tonnes of fibre per year. Economies of scale lead to reduced overhead, labour and energy use per kilogram processed, and also create advantages in accessing information and capital, and the ability to handle logistics efficiently.

Low interest rates worldwide will encourage entrepreneurs to emphasize capital-intensive manufacturing practices at the expense of labour-intensive practices. Accordingly, investments in faster and more automated machinery will continue.

Cotton is one of the world's very important industries, providing jobs and incomes to tens of millions of people worldwide, connecting producers in remote areas to world markets, and enhancing food security. However, the industry must change and adapt in order to compete with polyester, or it would decline. Cotton yields must increase, agronomic limits be overcome, resource use must decrease, and fibre characteristics require a transformation to reach a level of performance that meets the demands of consumers. Greater coordination among the value chain segments to enhance transparency, improve efficiency, and raise productivity would contribute to the long-term viability of the world cotton industry. Only by working hand-in-hand can the cotton sector overcome the challenges and become more resilient and sustainable.

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