

OUTLOOK FOR WORLD COTTON SUPPLY AND USE¹

Trends in Global Cotton Supply and Use

No Rebound in World Cotton Production in 2009/10

World cotton production declined in both 2007/08 (by 2%) and 2008/09 (by 10%) to 23.5 million tons, the smallest production since 2003/04. These two consecutive declines were caused principally by decreases in cotton area, as cotton prices have become less attractive relative to competing crop prices and production costs have increased. World cotton area decreased by 5% in 2007/08 and by 7% in 2008/09, to 30.7 million hectares. The world yield climbed to a record of 797 kg/ha in 2007/08, but was estimated down to 766 kg/ha in 2008/09 due mainly to unfavorable weather.

In 2009/10, world cotton area is expected to decline by 2%, to 30 million hectares, the second lowest since 1950/51.² Decreasing cotton returns, more attractive prices for competing crops, and expected difficulties in financing inputs (due to the tightening of credit as a result of the global economic crisis) are discouraging farmers from planting cotton. The average yield is projected at 782 kg/ha, slightly higher than in 2008/09, assuming more favorable weather. As a result, world cotton production is expected to remain stable at 23.5 million tons in 2009/10.

Cotton production is forecast to decrease in 2009/10 in China (Mainland) to 7.5 million tons, in Brazil to 1.1 million tons, in Uzbekistan to 1.0 million tons, in Turkey to 410,000 tons and in the CFA Zone³ to 520,000 tons, due to the lower cotton prices received by farmers during 2008/09 and/or competition from other crops. However, production is expected to increase significantly in India to 5.4 million tons. The considerable increase in seedcotton Minimum Support Prices in 2008/09 supported producers' prices well above international levels, and cotton area in India is expected to increase by 2% to 9.5 million hectares in 2009/10, accounting for 32% of world area. U.S. planted cotton area is estimated down in 2009, but assuming an abandonment rate lower than in 2008/09, harvested cotton area and production could increase by 4% to 2.9 million tons. Production in Pakistan is expected to increase by 6% to 2.1 million tons and production in Australia is forecast a third higher at 430,000 tons.

Possible Small Recovery in Mill Use in 2009/10

World cotton mill use was estimated stable in 2007/08, at 26.3 million tons, slightly above world production. However, world cotton mill use fell in 2008/09 for the first time in a decade, by an estimated 13% (the largest decline since World War Two) to 23.0 million tons. As the gap between production and consumption is reaching over half a million tons, world ending stocks are expected to increase by 4% to 12.9 million tons by the end of July 2009.

World cotton mill use is expected to increase slightly to 23.4 million tons (+2%) in 2009/10. This projection is based on a modest recovery in world economic growth in 2010. According to the June 2009 projections of the World Bank (WB), global economic growth decelerated from 3.8% in 2007 to 1.9% in 2008, and a contraction of 2.9% in global economic growth is expected in 2009. A gradual recovery is forecast to 2.0% growth in 2010 and 3.2% growth in 2011.

Cotton mill use is expected to increase in China (Mainland), India, Pakistan, Bangladesh, Indonesia and Vietnam in 2009/10. Chinese cotton mill use is forecast at 9.3 million tons, up by 3% from 2008/09 and accounting for 40% of the world total. Indian cotton mill use is projected to rise by 5% to 4 million tons. Pakistan cotton mill use is expected 4% higher at 2.5 million tons. Since 2007/08, these three countries have

¹ Presentation given during the Eurocotton 49th General Assembly, June 26, 2009, Paris, France.

² World cotton area was estimated at 29.5 million hectares in 1986/87.

³ The CFA franc is the currency of Francophone Africa

accounted for about two-thirds of global cotton mill use. However, cotton mill use is expected to continue to decline in the United States and many consuming countries in Asia, North America and Europe.

World production is forecast to equal mill use in 2009/10. As a result, world cotton stocks are expected to remain stable at 12.9 million tons. Stocks outside of China (Mainland) are forecast 4% higher than in 2008/09 at 9.5 million tons. Stocks in China (Mainland) are expected to decline by 10% to 3.4 million tons.

Slight Upturn in Trade in 2009/10

World cotton trade was estimated at 8.3 million tons in 2007/08. However, as a result of the decline in demand from importing countries, world cotton trade is projected down sharply to 6.1 million tons in 2008/09. This is the smallest volume traded since 2000/01.

World cotton trade is expected to partially recover in 2009/10. World imports are projected 5% higher at 6.5 million tons. Despite an expected increase in cotton mill use in China (Mainland) in 2009/10, imports are projected to rise only slightly to 1.5 million tons. Since the end of May 2009, the government of China (Mainland) has been selling cotton from the national reserve to domestic textile mills. The quantities expected to be sold are significant and will likely affect 2009/10 Chinese imports. Imports by Bangladesh and Turkey are forecast to increase in 2009/10 to 670,000 tons and 630,000 tons, respectively. Imports by Pakistan are expected to increase to 550,000 tons. The rise in shipments to Pakistan and Bangladesh would result from rebounding mill use, while the rise in shipments to Turkey would make up for the expected decline in production.

India is expected to account for most of the expected rise in exports, with Indian shipments forecast to triple to 1.1 million tons. India's share of world exports is expected to rebound to 16% in 2009/10, compared to 6% in 2008/09. Uzbek exports are also forecast to increase to 750,000 tons, regaining their 2007/08 market share, and Australian exports to 350,000 tons. However, exports from the United States are expected to decline by 14% to 2.4 million tons, and exports from Brazil are forecast down to less than 250,000 tons. The share of the United States in world exports reached 45% in 2008/09, the highest since the mid-1950s, but this share is expected to drop back to 37% in 2009/10, similar to the share reached in 2007/08.

Three Crises Affecting the World Cotton Market

Since 2007/08, the world cotton market has been affected by three successive events: a global commodity price crisis, which resulted in higher agricultural production costs and reduced world cotton area; a crisis in the cotton futures market, which hurt cotton trade mechanisms; and a global financial and economic crisis, which has had multiple effects on cotton mill use, trade and production.

- The Global Commodity Price Crisis

Prices of most commodities increased significantly between 2003 and the first half of 2008. This increase accelerated considerably starting in 2007. Crude oil prices increased from USD 29 per barrel in 2003 (annual average) to USD 133 per barrel in July 2008. The increase in energy prices triggered an escalation in fertilizer prices starting in mid-2007 and ending in the middle of 2008. The World Bank fertilizer price index increased by a factor of ten between 2003 and July 2008, and the rise in energy and fertilizer prices generated an increase in agricultural production costs. In addition, the level of stocks relative to the use of major food crops had been declining for some time, making their prices more sensitive to shocks. Demand for some food crops was boosted by government biofuel subsidies and mandates. Weather-related crop failures, speculation and some government policy decisions contributed to higher food crop prices during 2007 and the first half of 2008, and prices of many food crops remain higher than long run averages yet.

Fertilizers account on average for around 20% of overall cotton production costs, but there are large regional variations, depending on soils, weather, crop rotations and management, and the intensity of fertilizer use. Cotton is generally more expensive to produce than soybeans, maize and wheat. Cotton requires larger quantities of fertilizer than soybeans and wheat, and larger amounts of pesticides and fuel (if machine labor is used) than soybeans, maize and wheat. As a result, cotton production costs have been relatively more affected than these other crops by the crude oil and fertilizer price increases.

Prices of cotton's main alternative crops (grains and oilseeds in particular) have become more attractive than cotton prices over the last few years. This trend accelerated during 2007 and in the first half of 2008. As a

result, in the countries where shifts in acreage among crops were possible, many farmers opted out of cotton production to turn towards production of alternative crops.

Higher cotton production costs and more attractive prices for alternative crops were the main factors explaining the decline in world cotton area in both 2007/08 and 2008/09.

- The Cotton Futures Market Crisis

Futures prices were extremely volatile during March 2008, mostly because of increased speculative activity at the Intercontinental Exchange (ICE) and volatility in prices of competing commodities. The Cotton #2 contract for May 2008 delivery fluctuated between 69 cents per pound and 90 cents per pound during March 2008. The Cotlook A Index, an indicator of world cotton prices, demonstrated similar volatility, reaching a high of 90 cents per pound on March 3, 2008 and falling to 74 cents per pound on March 20, 2008.

The short-lived spike in futures prices meant that some merchants hedging their positions at the exchange were faced with huge margin calls and were forced to liquidate their positions at a loss. Many merchants could not recover from these losses in the physical market. Some were driven into bankruptcy and others decided to get out of the cotton business.

Other consequences of the March 2008 events are a decrease in banks' trust in the cotton futures market and a tightening of credit for merchants' margin calls, reduced trust of cotton market participants in the mechanisms of the futures market, and difficulties for merchants to purchase in advance and at fixed prices large quantities of cotton (as was commonly done before the futures market crisis).

- The Global Financial and Economic Crisis

The world economy expanded robustly in 2007, for the fourth consecutive year, spurred by rapid economic growth in developing countries. However, August 2007 marked the beginning of a period of global economic deceleration and crisis in the functioning of the housing, financial and commodity markets. According to the June 2009 projections of the WB, global economic growth decelerated from 3.8% in 2007 to 1.9% in 2008, and a contraction of 2.9% in global economic growth is expected in 2009. A gradual recovery is forecast in 2010 and 2011.

While the two crises mentioned earlier primarily affected cotton production and trade, the global economic crisis is influencing mainly textile purchases by end-use consumers and therefore cotton consumption. In addition, tightening credit for textile mills are slowing purchases of raw materials. In some countries (for example in Europe and in the United States), the global economic crisis is accelerating a decline in cotton mill use that started many years ago due to other factors. In other countries such as China (Mainland) and India, the two largest industrial users of cotton, cotton mill use is contracting in 2008/09 for the first time in many years. China (Mainland) accounts for around 40% of world cotton industrial consumption. Mill use in China (Mainland) rose by an average annual rate of nearly 11% between 1998/99 and 2007/08. However, 2008/09 mill use in China (Mainland) is projected at 9.0 million tons, a decline of 17% from the 2007/08 level. Likewise, Indian cotton use rose at an average rate of about 7% over the last five seasons, but a decline of 6% to 3.8 million tons is expected in 2008/09. The current decline in cotton mill use was unexpected in early 2008.

The global economic crisis, through its impact on world cotton mill use, is also affecting cotton trade, stocks and production. The lower demand for cotton is causing a 26% drop in imports this season, to 6.1 million tons. The ratio of world cotton imports to world mill use, which averaged 31% in the last decade, is falling to 26%, reflecting tighter credit conditions, tighter operating margins for textile mills and caution on the part of textile mill operators. Chinese imports, which represented 30% of global imports last season, are expected to drop by 43% in 2008/09 to 1.4 million tons. Exporters are being forced to carry larger stocks than desired. Exports are projected down by 7% in the United States to 2.8 million tons, by 77% in India to 350,000 tons, and by 38% in Uzbekistan to 550,000 tons. Global cotton stocks are expected to increase by 4% in 2008/09 to 12.9 million tons and the global stocks-to-use ratio is expected to increase from 47% to 56%, the highest since 1999/00. Finally, the tightening of credit conditions worldwide will also affect world cotton production in 2009/10, as it is making it more difficult for cotton producers to finance their inputs.

Cotton Prices

The season-average Cotlook A Index jumped by 23% to 73 cents per pound during 2007/08. Factors other than fundamental changes in cotton supply and use contributed to the significant increase in the level and volatility of cotton prices that season. Such factors perhaps included the weakening of the US dollar, soaring

prices of commodity futures, and increased participation by institutions and individuals not involved in physical cotton trade in the cotton futures market.

Taking into account the average Cotlook A Index between August 2008 and the first three weeks of June 2009, and expected levels of cotton supply and use, the ICAC Price Model 2007 projects the season-average Cotlook A Index at 60 cents per pound in 2008/09, down by 18% from last season. The 95% confidence interval ranges from 59 to 61 cents per pound.

Based on a price forecast of 60 U.S. cents/lb for 2008/09, the ICAC Price Model 2007 forecasts a season-average Cotlook A Index of 56 U.S. cents/lb in 2009/10 (the 95% confidence interval is between 44 and 61 cents/lb). This would represent a 7% decline from the projected 2008/09 average.

Increased Government Support to the Cotton Sector in 2008/09

Declining domestic cotton prices in 2008/09 have triggered different types of government interventions aiming to support producers' revenues in the largest cotton producing countries.

Subsidies to the cotton industry, including direct support to production, border protection, crop insurance subsidies, minimum support price mechanisms and export subsidies, are rising by more than twofold from US\$2.7 billion in 2007/08 to an estimated US\$5.7 billion in 2008/09. Government subsidies were provided by ten countries in 2008/09, and the subsidies average 13 US cents/lb, compared with 8 US cents/lb in 2007/08. This marks the highest level of direct government support to the cotton industry since 2005/06. The share of world cotton production receiving direct government assistance, including direct payments and border protection, increased from an average of 55% between 1997/98 and 2007/08, to an estimated 84% in 2008/09.

Competition between Cotton and Other Fibers

Fibers competing with cotton include natural fibers and chemical fibers, primarily polyester. Cotton's major advantages over its primary competitors in the chemical fiber complex include wearing comfort, natural appearance, moisture absorbency, and its status as a renewable resource. However, cotton also suffers from several disadvantages relative to chemical fibers, including contamination introduced during harvest, ginning and handling, annual fluctuations in the quantity and quality of production and consequent variability in prices. Cotton also has difficulty meeting the needs of modern spinning equipment for strength, uniformity and other quality parameters. For cotton, competition with chemical fibers has become an increasing challenge. At the start of the 20th century, cotton had a dominant share of the textile market. At the beginning of the 21st century, cotton is one of many fibers available and has lost its dominant share of the textile market to polyester.

World end-use total fiber consumption more than quadrupled from 15 million tons in the early 1960s to 65 million tons in recent years. World textile fiber consumption is driven by three major economic variables: income, population and fiber prices. While about one-third of the impressive increase of the last 50 years was the result of population growth, the remaining increase was the result of higher income per capita, declines in real textile prices, and the development of new uses for textile fibers. However, the rate of growth of textile fiber consumption decelerated gradually over the 20th century, due to decelerations in the growth of income and population. Between 2000 and 2007, textile fiber consumption increased faster than in any other similar period on record, averaging almost 5% annually, pushed by a period of high and sustained economic growth in developing countries and an exogenous factor, the gradual integration of textile trade into World Trade Organization (WTO) rules. However, due to global economic hardships, textile fiber consumption declined by 5% between 2007 and 2008, from 68.5 million tons to 65.2 million tons.

Similarly to total textile fiber consumption, consumption of cotton experienced a significant increase over the last five decades, influenced mainly by relative fiber prices, income and population. 80% of the increase in cotton consumption can be attributed to population growth, while the rest can be attributed to higher income per capita, declining or stable long-term prices of cotton relative to other fibers, and promotional efforts. While over these last 50 years, cotton consumption more than doubled, from 10 to 25 million tons, consumption of other textile fibers increased by 400%, from 5 to 40 million tons. Most of that increase was due to non-cellulosic fiber, or polyester.

As a result, cotton's share in world textile fiber use declined from about 65% in 1960 to about 38% in 2008. Relative fiber prices are important factors influencing fiber market shares. In the 1960s and 1970s the decrease in cotton's market share was steep and can be attributed to the rapid development of the man-made fibers sector and the decline in the price of man-made fibers.⁴ During the 1980s cotton's share remained stable at around 49%, but declined to 39.2% in the 2000s. During most years in the 1980s and 1990s, cotton prices were higher than polyester prices, explaining much of the decline in fiber market share of cotton during those years. However, between 2001 and 2006 cotton prices tended to be lower and polyester prices tended to be higher. As a consequence, the decline in the market share of cotton over that period was slower than during the 1980s and 1990s.

The market share of cotton in the textile market declined substantially over the last three decades in developing countries, from a peak of 64.4% in 1984 to 33.8% in 2007. In Central and Eastern Europe and ex-USSR countries, the market share of cotton declined from 56.2% in 1987 to 20.3% in 1996, before recovering to 39.7% in 2007. In industrial countries, the market share of cotton increased from 37.4% in 1981 to 44.5% in 2000, and it has since fluctuated between 43.4% and 45.5%.

World cotton consumption per capita fluctuated between 3.1 kilograms and 3.4 kilograms during the 1960s and 1970s, and increased steadily from 3.1 kilograms in 1982 to 3.7 kilograms in 1987, only to decline again through 1998, when it reached 3.2 kilograms. Between 1999 and 2007, cotton consumption per capita increased steadily at an average annual rate of 2.6%, reaching a record of 4 kilograms. In 2008, it was estimated at 3.7 kilograms. But while the annual average rate of growth of cotton consumption per capita between 1980 and 2007 amounted to 3.4% in industrial countries, it amounted to 0.8% in developing countries and -2.9% in Central and Eastern Europe and ex-USSR countries. In 2007, industrial countries consumed 13.7 kilograms of cotton per capita, developing countries 2.2 kilograms, and CEE & ex-USSR countries 2.1 kilograms.

According to the ICAC Textile Demand Model, world demand for end-use cotton and non-cotton textile fibers is more sensitive to changes in income than to changes in relative prices. Furthermore, the sensitivity of the demand for other textile fibers to income is significantly higher than the corresponding sensitivity of the demand for cotton, implying that a given increase in GDP per capita results, on average, in a higher proportional increase in demand for other textile fibers than in demand for cotton. Finally, since the level of consumption of other textile fibers is higher than the level of consumption of cotton, a given increase in GDP per capita is expected to result in a lower share of cotton in world textile fiber consumption. Without industry intervention, only a significant decrease in the price of cotton relative to other textile fibers can offset the loss in the world market share of cotton due to increases in income.⁵ However, as income levels increase in developing countries, it is expected that the sensitivity of the demand for cotton to income will increase, while the opposite is expected to occur with the sensitivity of the demand for other fibers. Therefore, increases in income will result in sequentially smaller declines in the market share of cotton.

Based on projected sluggish growth in world GDP per capita in 2009, and high relative prices of cotton in 2007 and 2008, the share of cotton in world fiber consumption is expected to decline to 35.3% in 2009. The expected decline of cotton's share in world textile fiber consumption is the result of expected lower consumption of cotton fibers and higher consumption of non-cotton fibers. However, the market share of cotton is expected to increase slightly to 35.8% in 2010 due to a lower relative price of cotton in 2009.

World textile fiber consumption is projected to expand at an annual average rate of 2.75% to reach 120 million tons by 2030. This projected rate of growth is lower than the 3.3% rate observed between 1960 and 2007, and is consistent with expected moderate global economic growth and slower world population growth. World cotton consumption and production are projected to expand at a lower annual average rate of 0.5% to reach 30 million tons in 2030. As a result, the market share of cotton in world textile fiber demand is expected to fall to around 25% by 2030.

⁴ One common area of misunderstanding is the relationship between oil prices and prices of polyester fiber. It is commonly assumed that because polyester is derived from chemicals refined from oil, increases in crude oil prices lead to increases in polyester prices. However, the precursor chemicals used to make polyester staple account for less than 1% of oil consumption. As a consequence, the prices for the chemicals used to make polyester bear little correlation with oil prices. Therefore, oil prices influence polyester prices indirectly, through their impact on energy prices, and the magnitude of this influence is small.

⁵ ICAC Secretariat research indicates that promotion is effective in boosting demand for cotton.

Cotton: World Supply & Demand



Armelle Gruère, ICAC
Eurocotton 49th General Assembly
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OUTLINE

- I. Trends in Cotton Supply & Use
- II. The 3 Crises Affecting Cotton S & U
- III. Cotton Prices
- IV. Cotton vs. Competing Fibers

TRENDS IN GLOBAL COTTON SUPPLY & USE

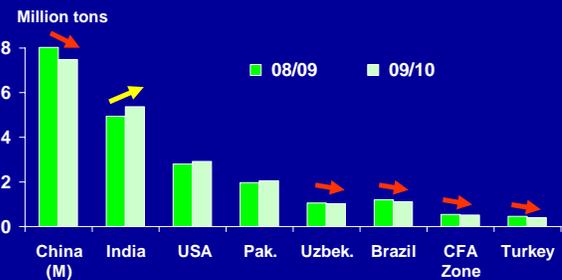
World Cotton Production & Mill Use

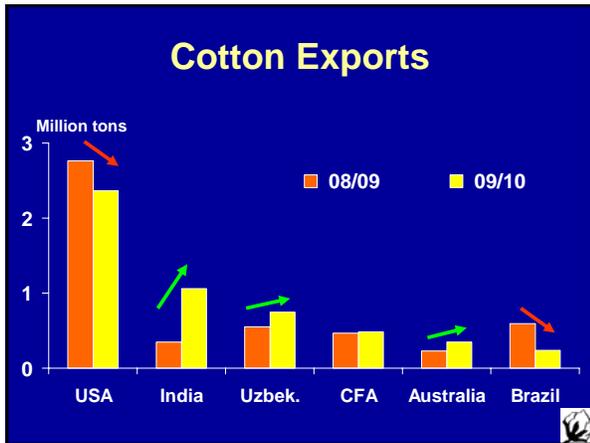
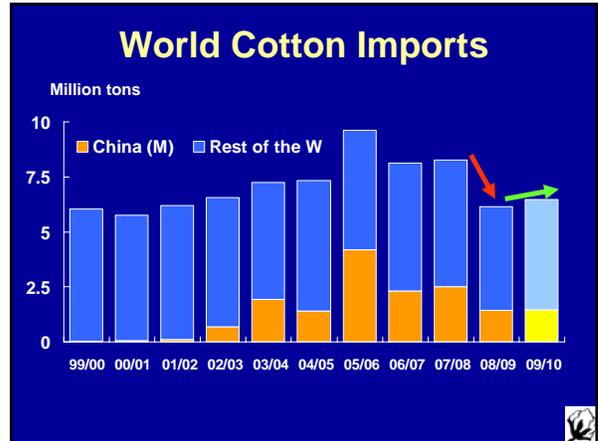
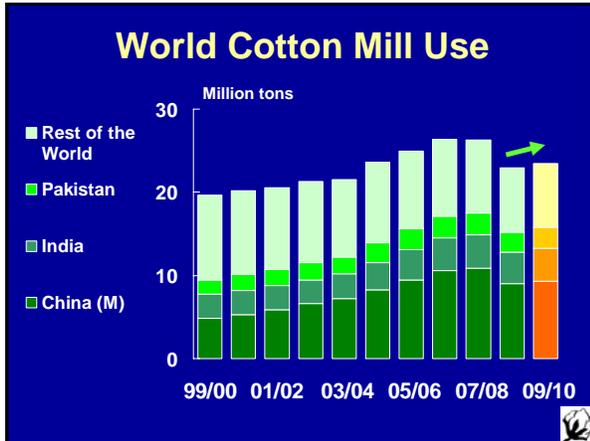


World Cotton Area and Yield



Cotton Production

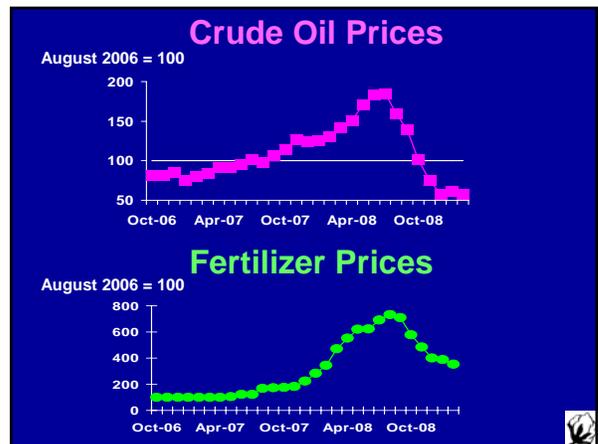


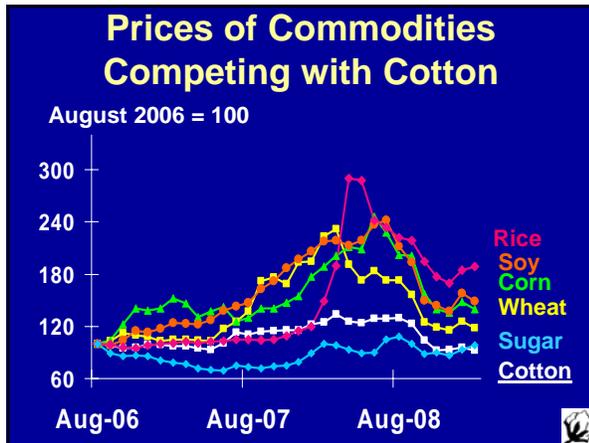


THE 3 CRISES AFFECTING THE WORLD COTTON MARKET

1. Global Commodity Price Crisis
2. Cotton Futures Market Crisis
3. Global Financial and Economic Crisis

1. Global Commodity Price Crisis

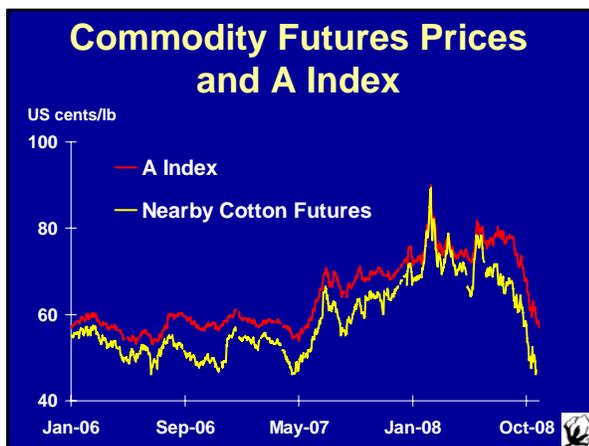




- ### Global Commodity Price Crisis
- Increase in cotton production costs
 - Prices of competing crops rose faster than cotton prices
- ⇒ contributed to the decline in world cotton area and production in 2007/08 and 2008/09

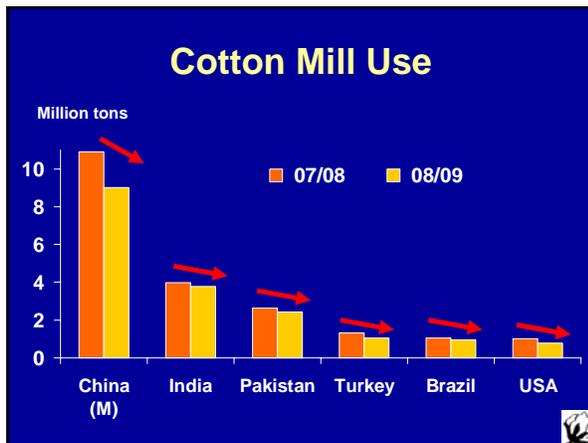
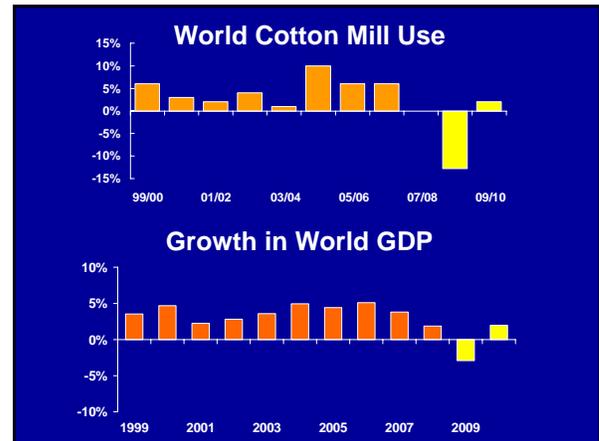


2. Cotton Futures Market Crisis



- ### Cotton Futures Market Crisis
- March 2008 spike in cotton futures prices
- ⇒ Substantial losses amongst cotton merchants
- ⇒ Trading cotton is more difficult

3. Global Financial and Economic Crisis



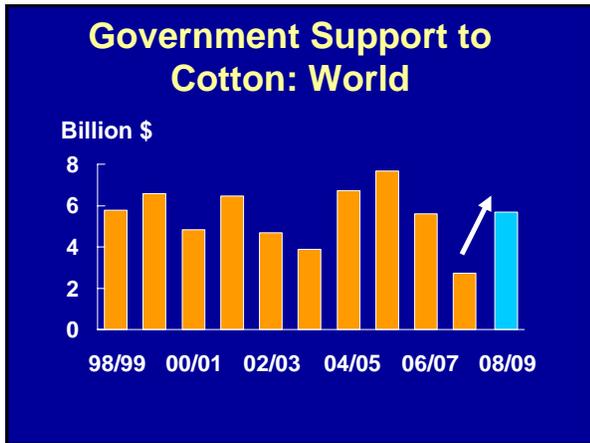
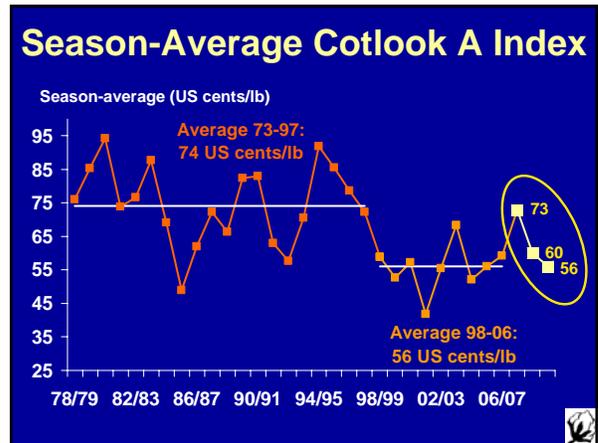
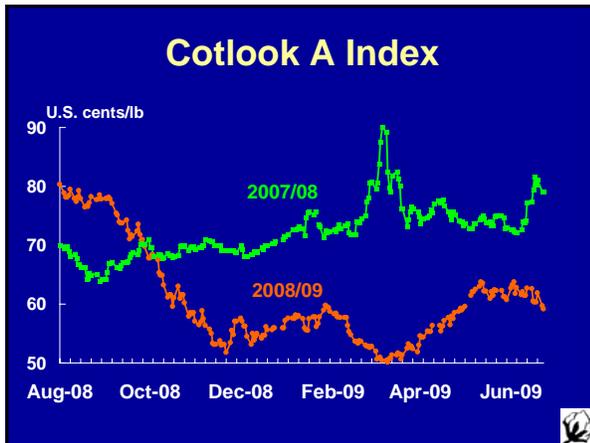
Global Financial and Economic Crisis

- Slower global economic growth
 - Tightened credit conditions
- ⇒ Affects primarily cotton consumption
- ⇒ Indirectly affects cotton trade, stocks (and production next season)

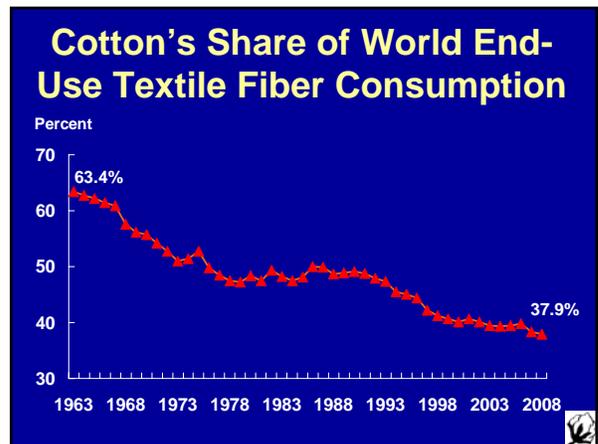
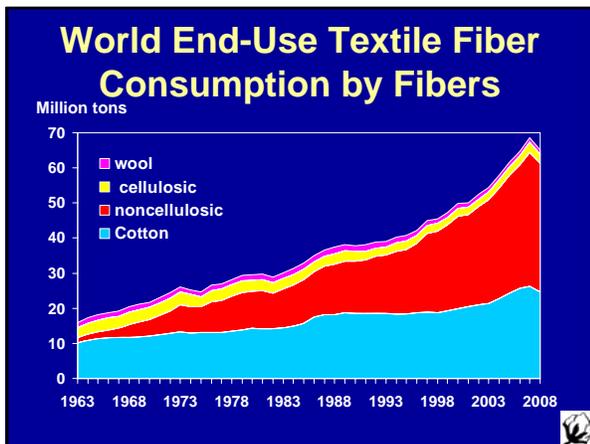
The 3 Crises Affecting the World Cotton Market

1. Commodity Prices ⇒ PRODUCTION
2. Cotton Futures Market ⇒ TRADE
3. Global Economy ⇒ CONSUMPTION (and trade, stocks and production...)

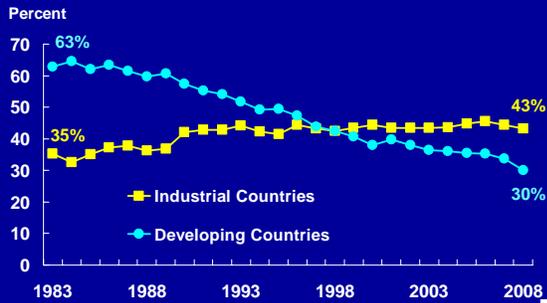
COTTON PRICES



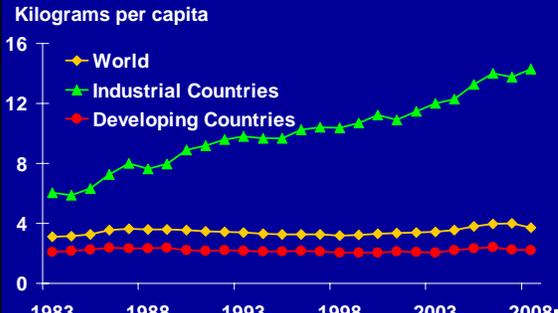
COMPETITION BETWEEN COTTON & OTHER FIBERS



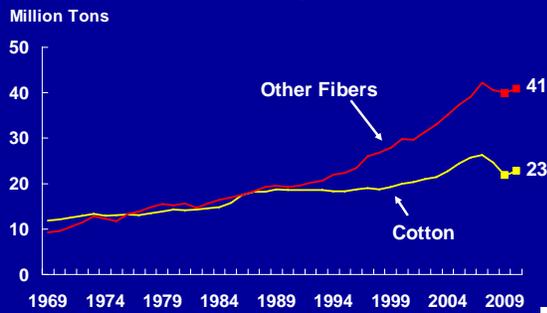
Cotton's Share of End-Use Textile Fiber Consumption



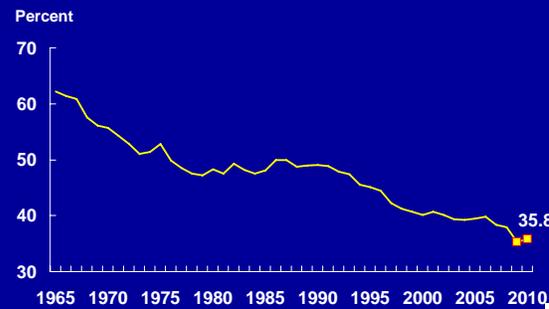
End-Use Cotton Consumption per Capita



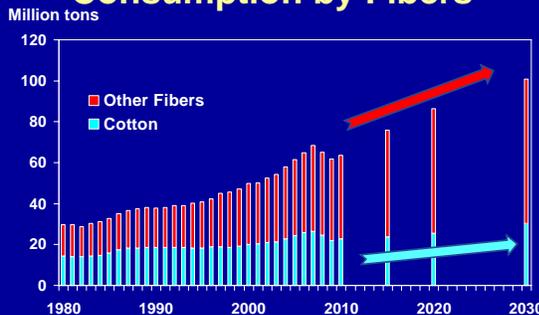
World End-Use Textile Fiber Consumption



Cotton's Share of World End-Use Textile Fiber Consumption



World End-Use Textile Fiber Consumption by Fibers



International Cotton Advisory Committee