

Cotton Economics Research Institute Policy Modeling Group

Darren Hudson, Director

Suwen Pan, Research Scientist

Maria Mutuc, Post Doctorate Associate

Samantha Yates, Publication Specialist

Don Ethridge, Professor Emeritus

Cotton Economics Research Institute
Department of Agricultural and Applied Economics
Texas Tech University
Lubbock, TX 79409
Telephone: 806.742.2821

Email: darren.hudson@ttu.edu
<http://www.ceri.ttu.edu/policy>

EXECUTIVE SUMMARY

- **ECONOMIC FUNDAMENTALS**

- Real GDP growth is projected at -1.9% in 2009 for the world before it slowly recovers to an average of 3.4% thereafter.
- A more favorable exchange rate between the Chinese yuan and the U.S. dollar will allow for U.S. cotton to be more attractive to China's cotton textile industry.

- **COTTON MILL USE**

- Cotton fiber use is projected to grow by about 21 million bales over the next 10 years (18%). Mill use is projected to remain concentrated in Asia. By 2019/20, the nations/regions that lead the world in cotton mill use are projected to be (share of world mill use in parentheses): China (46%), India (16%), Pakistan (11%), Bangladesh (4%), and Turkey (4%).

- **COTTON PRODUCTION**

- Production gains to meet increased mill use will largely come from improved yields due to technological advances rather than increased area (notable exceptions include Brazil and the African region). By 2019/20, leading producers of cotton are projected to be (share of world production in parentheses): China (32%), India (22%), the United States (13%), Pakistan (9%), and Brazil (6%).

- **WORLD COTTON TRADE**

- World trade in cotton is projected to continue its upward trend, growing by 12 million bales by 2019/20, a 35% increase from 2009/10.
- China will account for the vast majority of this increase: Chinese cotton imports are projected to expand by 9.9 million bales. Leading cotton importers in 2019/20 are projected to be (world import share in parentheses): China (42%), Bangladesh (12%), Pakistan (8%), Turkey (8%), and Vietnam (4%).
- The United States is projected to remain the world's leading cotton exporter in 2019/20 with a 32% market share. Increased competition in the export market (with projected export market share in parentheses) will come from India (19%), Uzbekistan (9%), Brazil (8%), Australia (6%), and WCA (5%).

GLOBAL AND U.S. OUTLOOK

MACROECONOMIC PROJECTIONS

REAL GDP GROWTH RATE: DEVELOPED vs. DEVELOPING COUNTRIES

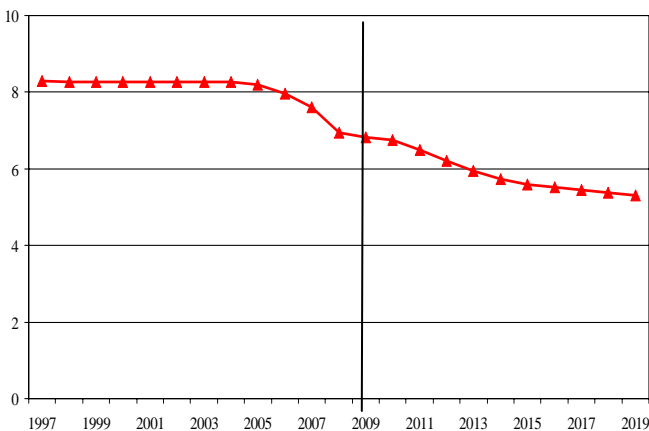
Percent



- Owing to the economic recession, real GDP growth rates will be negative in developed countries while remaining positive in developing countries in 2009.
- In developed countries, average annual growth rate will be -3.5% in 2009 and recover to around 2.3% for the rest of the period.
- In developing countries, average real GDP growth is projected to be 1.6% in 2009 and slowly recover to around 5.5%, on average, for the rest of the forecasting period.

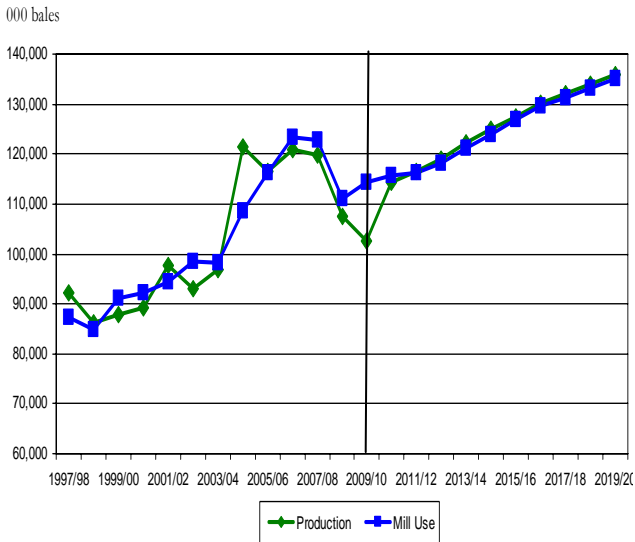
CHINESE EXCHANGE RATE PROJECTIONS

Yuan per Dollar



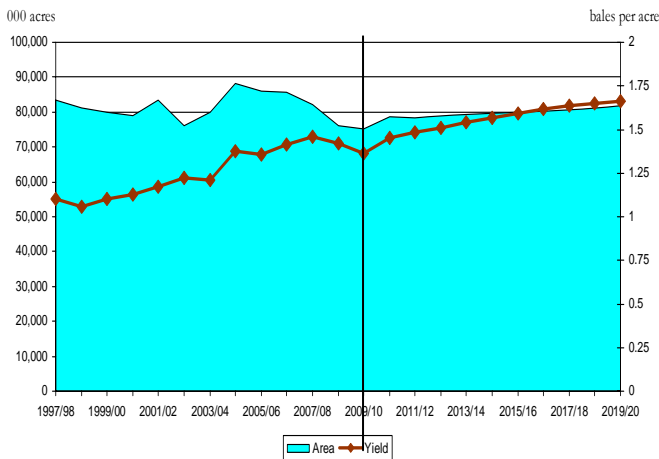
- The Chinese yuan is projected to deflate from 6.8 yuan per U.S. dollar in 2009 to 5.3 yuan per U.S. dollar in 2019.

WORLD COTTON PRODUCTION and COTTON MILL USE



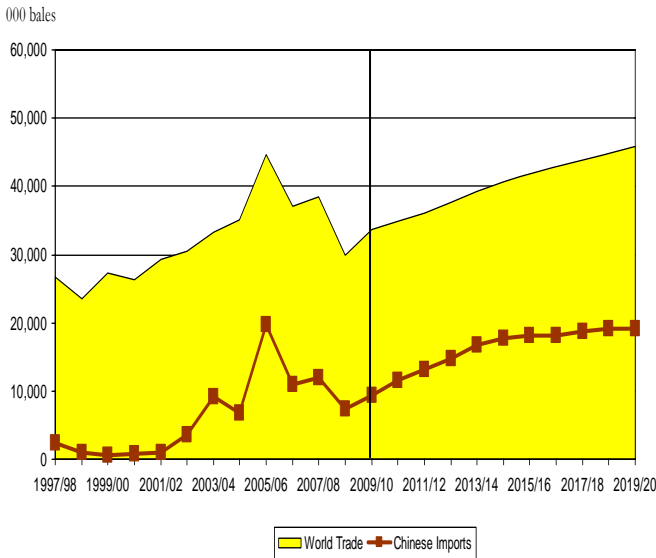
- Mill use, which has exceeded production in the last 4 years, is projected to grow by about 20.7 million bales over the next ten years.
- World cotton production is projected to track the growth of mill demand by increasing from 103 million bales in 2009/10 to around 136 million bales in 2019/20.

WORLD COTTON HARVESTED AREA and YIELD



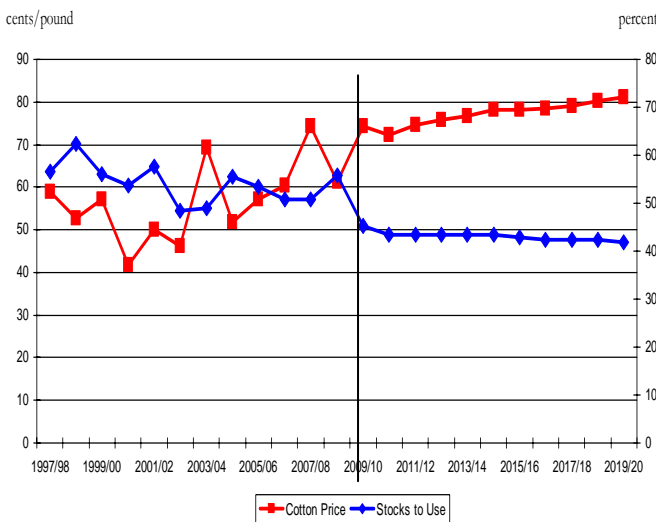
- A steady recovery in cotton acreage is projected in the next ten years with harvested area increasing from 75 million acres in 2009/10 to 82 million acres by 2019/20.
- Worldwide gains in cotton production are projected to come from improved yields as well, with the average projected to increase from 1.37 bales per acre in the current marketing year to 1.66 bales per acre by 2019/20 - a gain of 21%.

WORLD COTTON TRADE



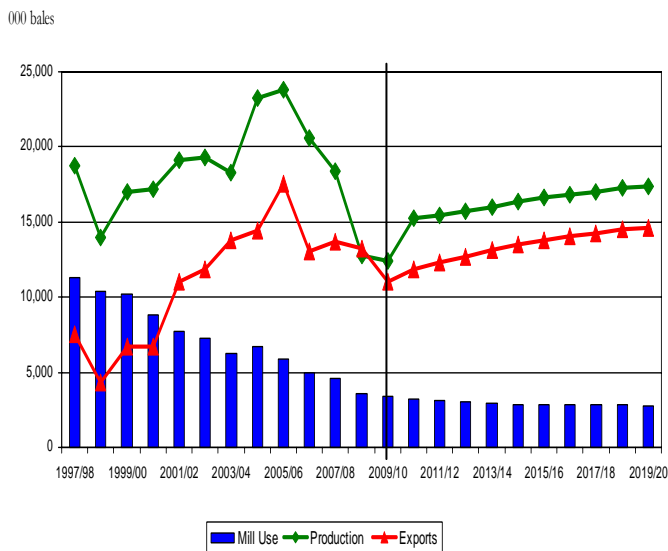
- World cotton trade is projected to grow in line with its historical trend: 34 million bales in 2009/10 to 46 million bales in 2019/20.
- China is projected to account for the bulk of this increase with imports projected to increase by 9.9 million bales.

WORLD COTTON PRICE vs. STOCK-TO-USE RATIO



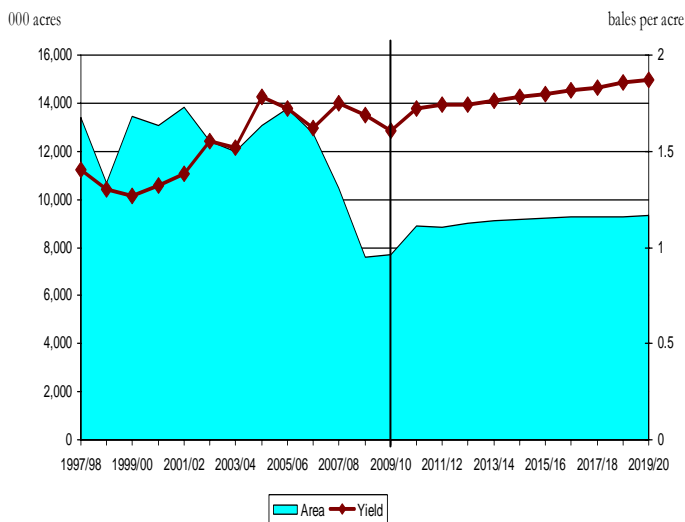
- The stocks-to-use ratio is projected to decline from 45% to 42% over the next ten years. The world cotton price (A-index) is expected to keep a range of 72-82 cents/lb for the projection period.

UNITED STATES: PRODUCTION, EXPORTS, and MILL USE



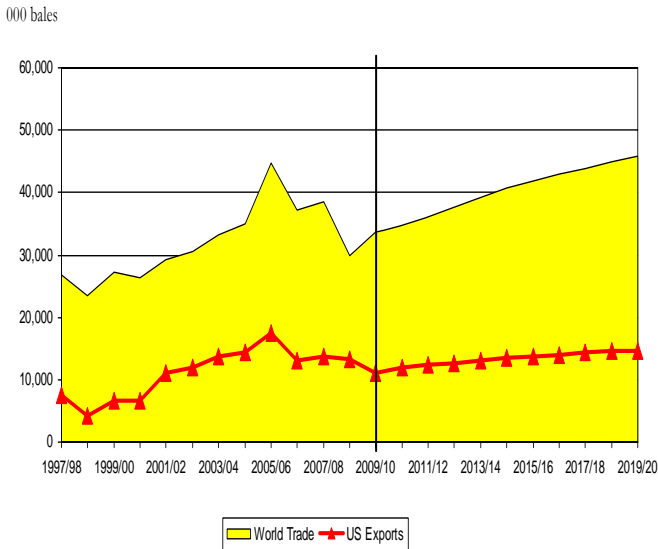
- From 2009/10 onward, production is expected to recover slightly to around 17.4 million bales in 2019/20.
- Cotton exports is expected to recover 3.5 million bales in the next ten years.

UNITED STATES: HARVESTED AREA and YIELD



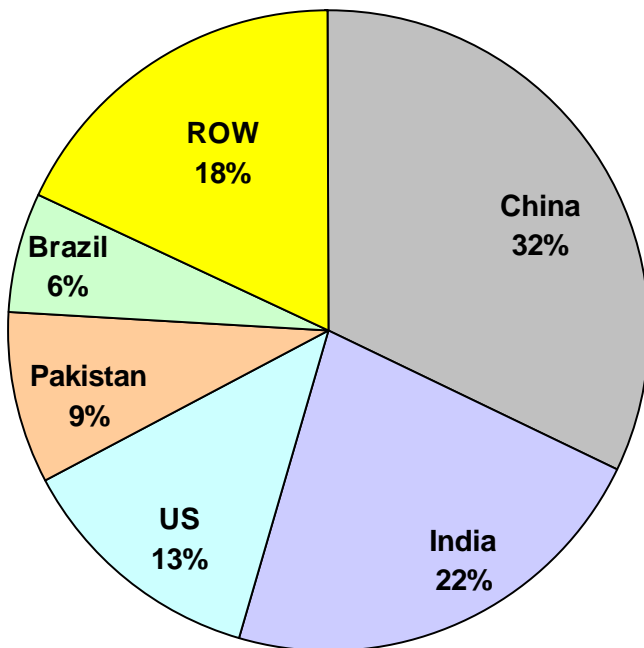
- Due to ethanol development in the U.S., cotton acreage will remain under 10 million acres in the next ten years.
- Cotton yield averaged nationally at 1.61 bales per acre in 2009/10, lower than its long term trend. We expect yield to grow 1.6% annually in the next ten years.

WORLD COTTON TRADE and U.S. EXPORTS



- World cotton trade is expected to be 33.7 million bales in 2009/10 due primarily to a stronger Chinese textile industry recovering.
- Exports from the United States are estimated to account for about 33% of world cotton trade in 2009/10. This percentage is projected to continue in the next ten years.

SHARE OF WORLD COTTON PRODUCTION: 2019/20



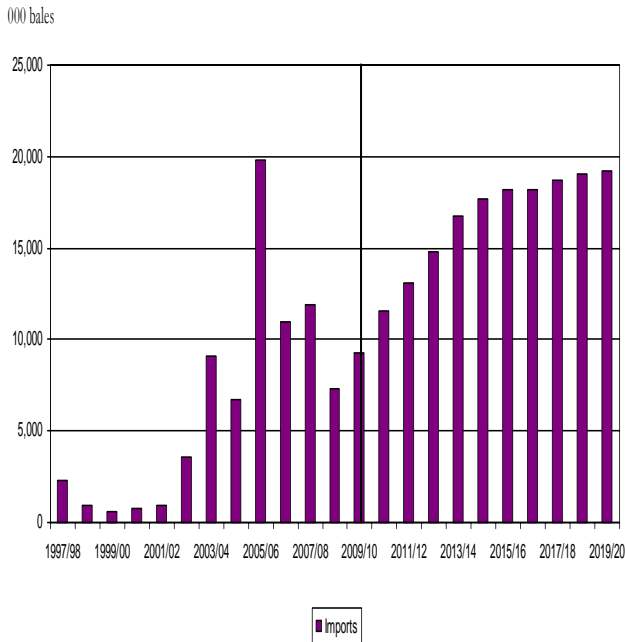
- Over the next ten years, share of world cotton production for major cotton producers is expected to keep current level. China still leads the world cotton production with India and the U.S. at second and third, respectively.

2009/10 2019/20

- | | |
|-------------------|---------------|
| 1. China (31%) | China (32%) |
| 2. India (23%) | India (22%) |
| 3. U.S. (12%) | U.S. (13%) |
| 4. Pakistan (10%) | Pakistan (9%) |
| 5. Brazil (5%) | Brazil (6%) |

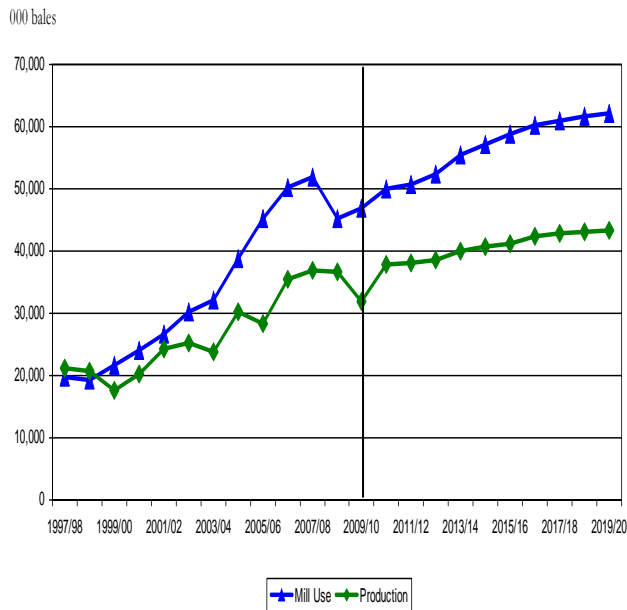
MAJOR GROWTH MARKETS

CHINA: COTTON IMPORTS



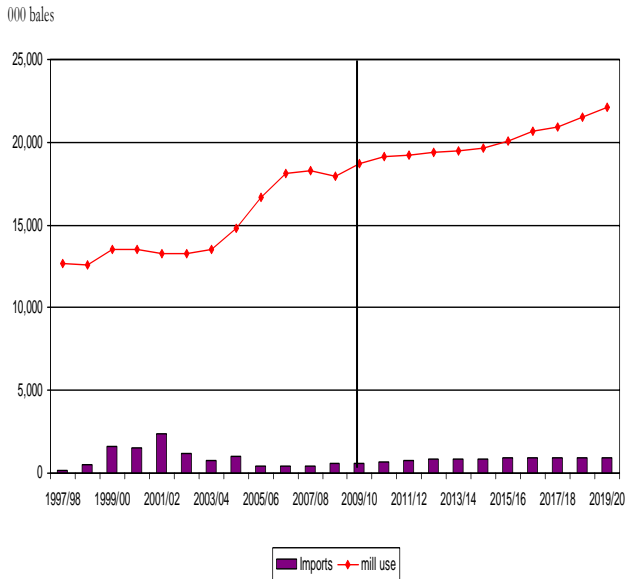
- The world economy will recover in the next two years. Chinese mill use is expected to increase by 4% and 6% in 2009/10 and 2010/11, respectively. Imports are expected to increase 27% and 25% in these two years. As the economy turns around in the future, Chinese cotton imports are projected to increase from 9.3 million bales in 2009/10 to 19.2 million bales in 2019/20.

CHINA: COTTON PRODUCTION and CONSUMPTION



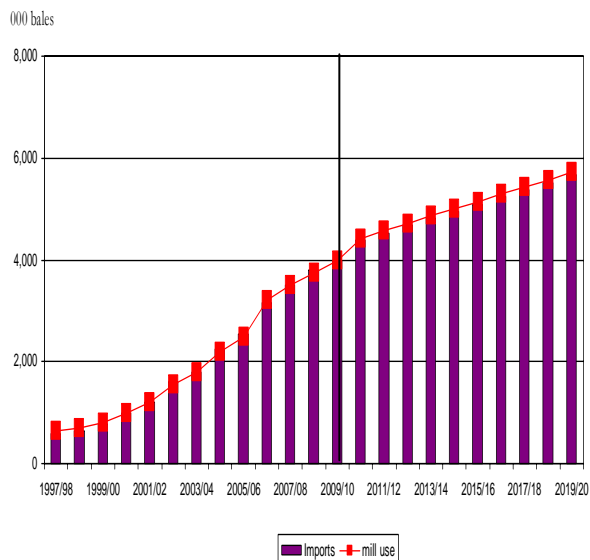
- China is projected to remain the world's largest cotton user (41% of world total in 2009/10).
- Chinese mill use is projected to recover back to normal levels. China's share of world cotton mill use is projected to reach 46% in 2019/20.
- Due to recent increases in labor cost, Chinese textile expansion will slow down in the next ten years; some of mills will move to Bangladesh, and Vietnam.

INDIA: COTTON MILL USE and IMPORTS



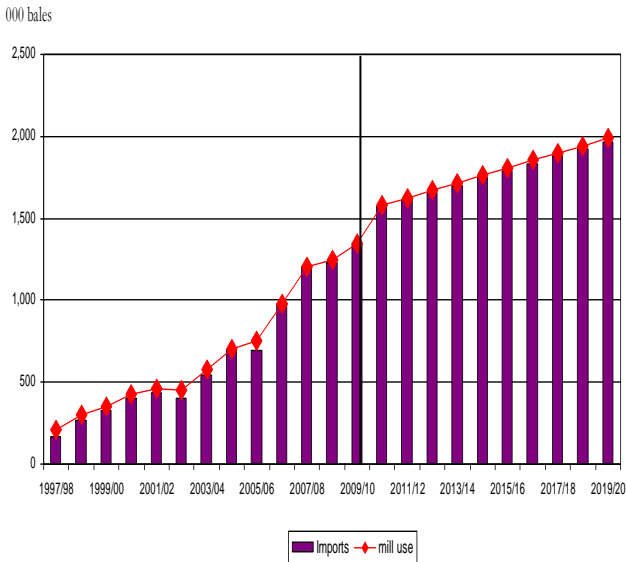
- An expanding cotton textile industry is projected to increase cotton mill use by 18% over the next 10 years.
- However, imports of cotton will be limited due to significant production increases in the next 10 years.

BANGLADESH: MILL USE and IMPORTS



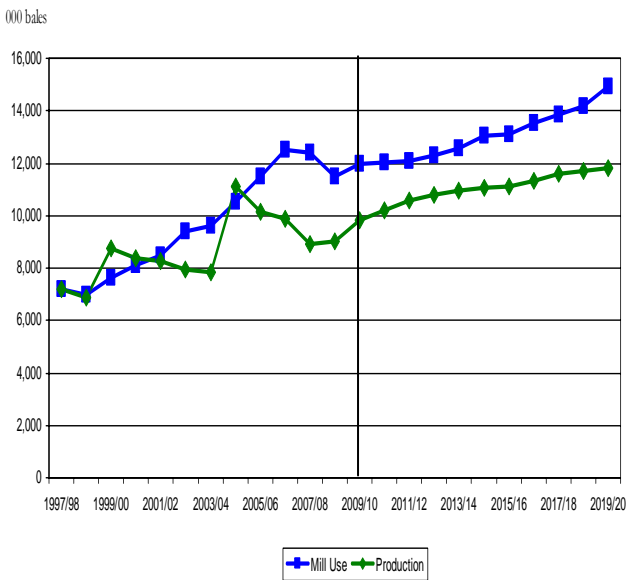
- Cotton mill use by Bangladesh is projected to grow by about 43% over the next 10 years, sustaining its position as one of the main textile expansion countries in the world.
- Due to low production, most of the cotton mill use comes from imports. The U.S. is a leading supplier of cotton, but faces competition from India, Australia, and African countries.

VIETNAM: COTTON MILL USE and IMPORTS



- Following the same pattern with Bangladesh, Vietnam's cotton imports are expected to increase 46% in the next ten years to satisfy the textile expansion in the country.

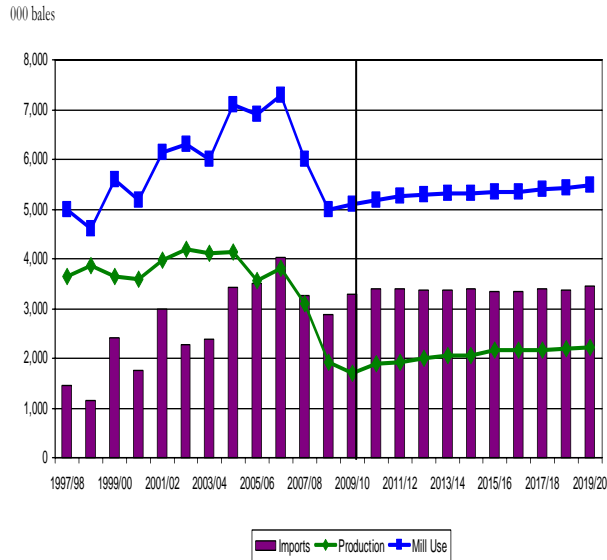
PAKISTAN: COTTON MILL USE and PRODUCTION



- A modernizing and expanding Pakistani textile industry is projected to boost cotton mill use to around 3 million bales in the next 10 years.
- The 2009/10 cotton area is forecasted to increase by 2%, to 7.4 million acres. Although Bt cotton have not been officially adopted in Pakistan, unofficial numbers indicate that Bt cotton has been planted in more than half of the total cotton acreage.

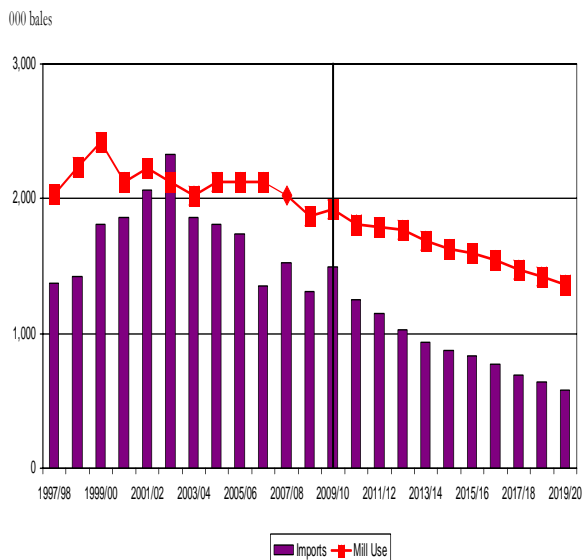
DECLINING/STAGNANT MARKETS

TURKEY: MILL USE, PRODUCTION, and IMPORTS



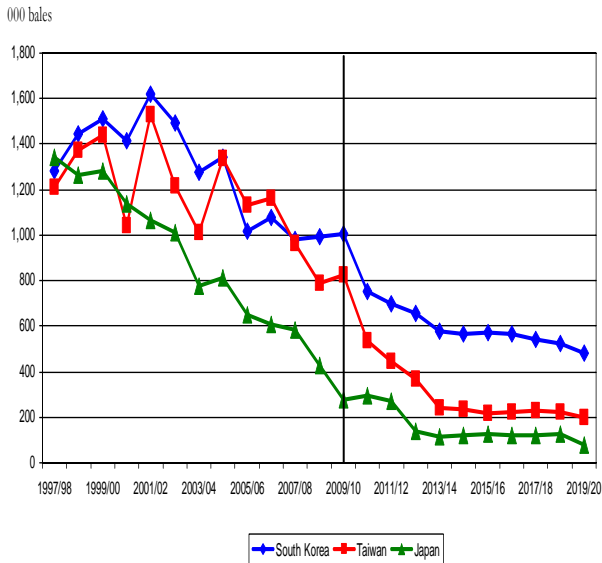
- Turkish textile producers are expected to face tougher competition from Asia over the next 10 years. While in the previous decade, mill use grew by 46% (an increase of 2 million bales). Projected mill use growth is 8% for the next 10 years.
- Due to higher returns on corn and vegetables, planted area is expected to decrease by 18% in 2009/10. However, cotton production is projected to grow slowly at trend levels as the price of cotton recovers.

MEXICO: COTTON MILL USE and IMPORTS



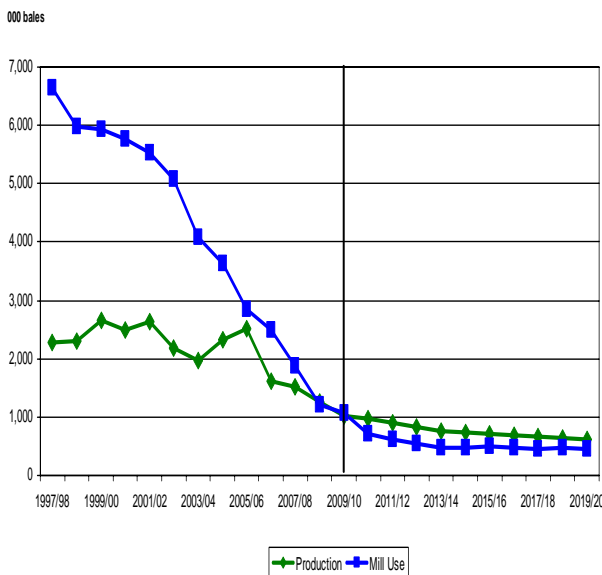
- After an initial surge of cotton mill use (and imports) in Mexico following the signing of NAFTA, competition from Asia has caused a significant and persistent decline in Mexico's cotton textile industry. This decline is projected to continue.

SOUTH KOREA, TAIWAN, and JAPAN: COTTON IMPORTS



- South Korea, Taiwan, and Japan continue to experience steep declines in cotton imports - from a combined 2.1 million bales in the current period down to 0.8 million bales by 2019/20.

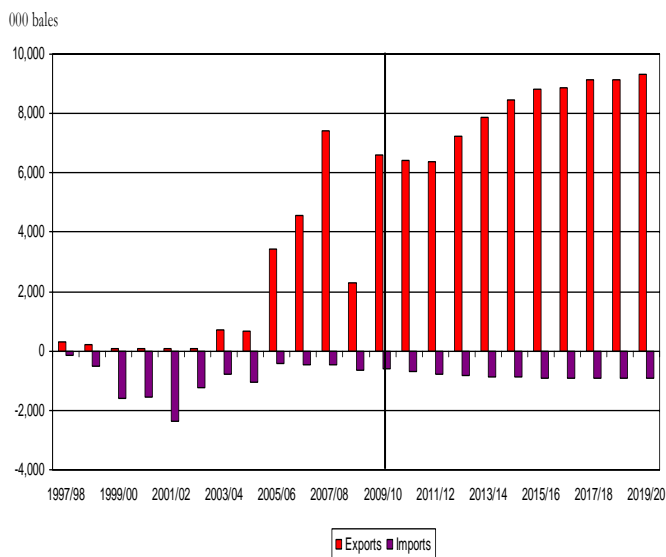
EUROPEAN UNION: COTTON PRODUCTION and CONSUMPTION



- The overall decline of the cotton industry in the E.U. is projected to continue.

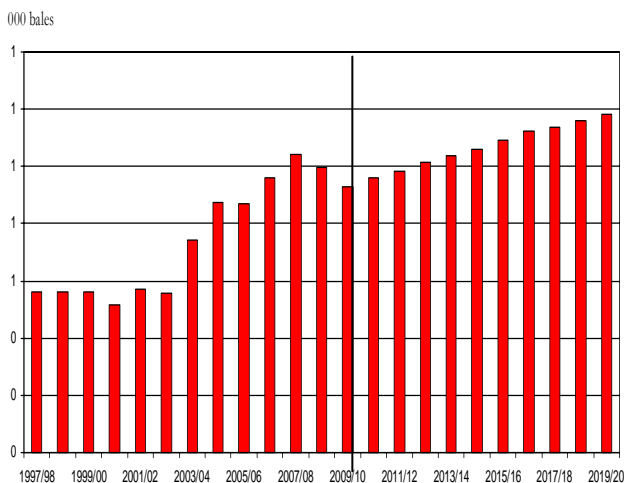
MAJOR COMPETITORS

INDIA: COTTON TRADE



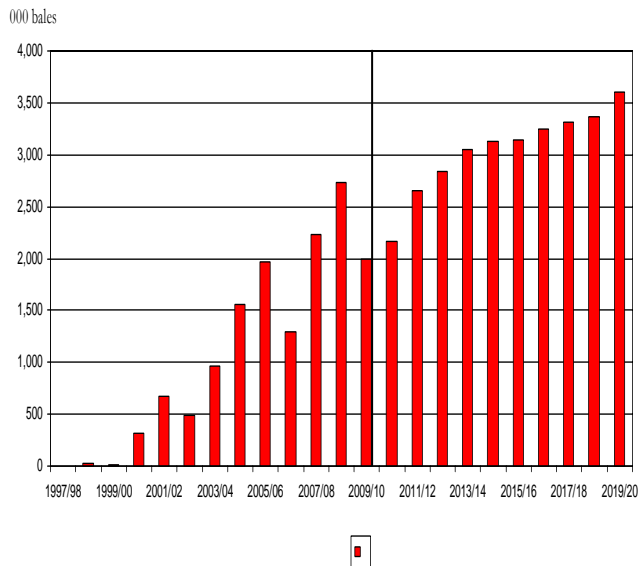
- India became the second largest cotton producer in the world in 2006/07 and is expected to remain as such in the next ten years.
- India is also projected to be the world's second largest exporter over the projection period, 5.2 million bales short of U.S. exports in 2019/20.

INDIA: COTTON YIELD



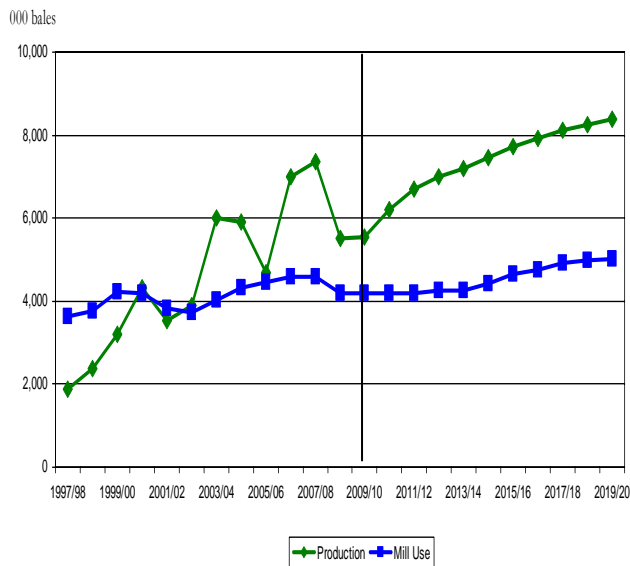
- Harvested cotton area in India is projected to increase due to the high net return in cotton and high minimum support price recently announced by the Indian government; it is expected to reach 25.9 million acres in 2019/20 relative to 25.4 million acres in 2009/10.
- Production gains are projected to come from both increased areas and increased yields.
- With most cotton areas already planted with Bt cotton, the upward trend in yield is projected to slow down.

BRAZIL: COTTON EXPORTS



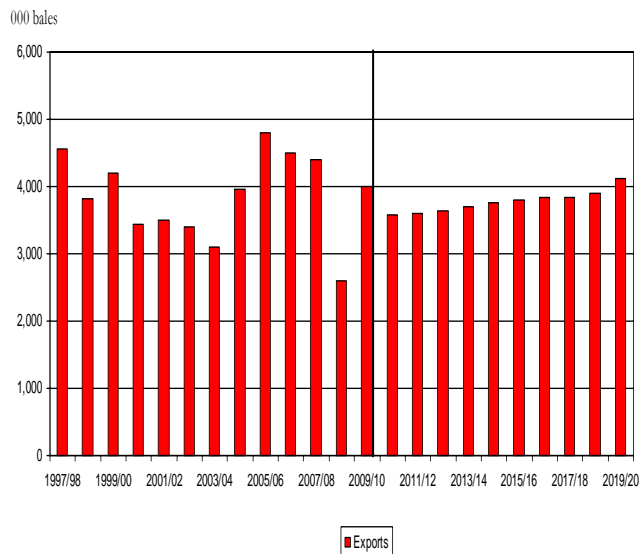
- Brazilian cotton exports weakened in 2009/10 due to exchange rate valuation, credit difficulties, ethanol developments, and infrastructure limitations.
- However, cotton exports are projected to continue their upward trend, increasing from 2 million bales in 2009/10 to 3.6 million bales in 2019/20.

BRAZIL: COTTON PRODUCTION and CONSUMPTION



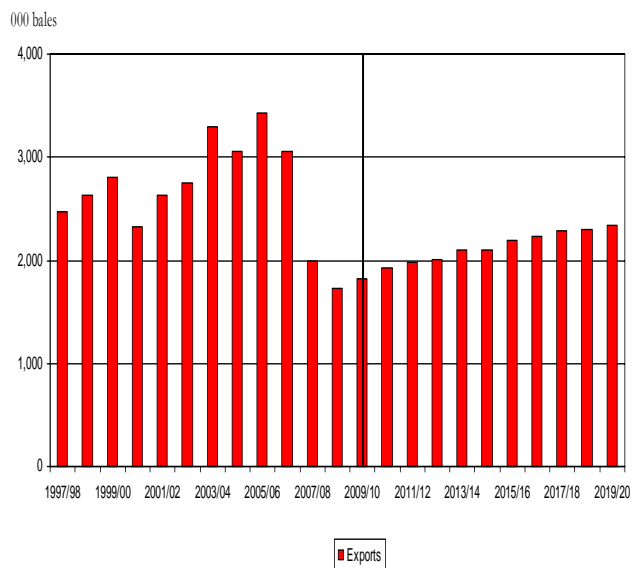
- Production gains will stem primarily from increased acreage as harvested area is projected to increase from 2 million acres to 2.7 million acres over the next 10 years.
- Yields are projected to increase from 2.7 bales per acre to 3.1 bales per acre.
- With steady mill use, exports are projected to increase proportionally to production. It will support around 8% of world cotton trade in 2019/20.

UZBEKISTAN: COTTON EXPORTS



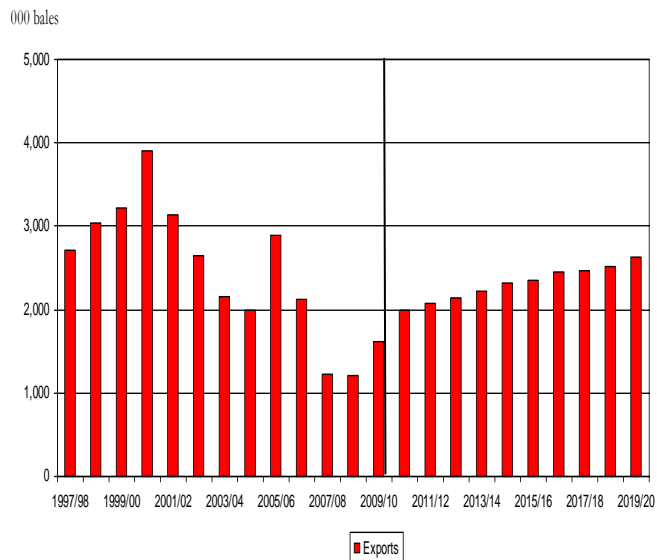
- Uzbekistan is the third largest cotton exporter behind the United States and India since 2006/07.
- Cotton exports from Uzbekistan are projected to be 4 million bales over the next ten years and account for 12% of world cotton trade in 2019/20.

WEST CENTRAL AFRICA: COTTON EXPORTS



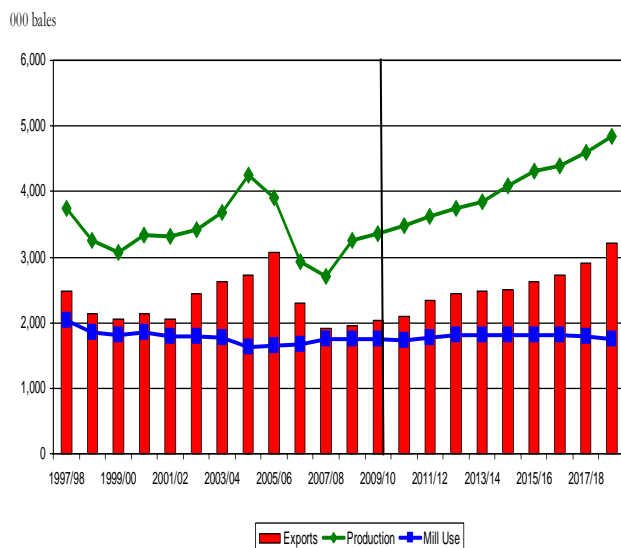
- As a group, the WCA region (Benin, Burkina Faso, Chad, and Mali) accounts for 5% of world cotton exports.
- With a relatively small textile industry, cotton exports are an important component of economic development in this region.
- Projections are for a 0.5 million bale increase in production and 0.5 million bales rise in exports over the next 10 years.

AUSTRALIA: COTTON EXPORTS



- Widespread drought has severely reduced Australia's cotton crop in recent years, dropping Australia out of the top five world cotton exporters.
- Resumption of significant cotton production and exports is contingent on the rate of recharge of water resources.
- Australia is projected to export 2.6 million bales in 2019/20 due to a slow recovery process.

OTHER AFRICA: COTTON PRODUCTION, EXPORTS and CONSUMPTION



- Other Africa Region is rank next to Uzbekistan in world cotton exports by 2019/20 (3.2 million bales).

TABLES