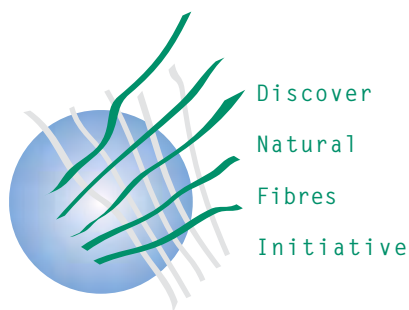




# COTTON :

## Review of the World Situation

International  
Cotton  
Advisory  
Committee

Volume 67 - Number 3  
January-February 2014

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# SUPPLY AND DISTRIBUTION OF COTTON

February 3, 2014

Seasons begin on August 1

|                                   | 2009/10             | 2010/11       | 2011/12       | 2012/13<br>Est. | 2013/14<br>Proj. | 2014/15<br>Proj. |
|-----------------------------------|---------------------|---------------|---------------|-----------------|------------------|------------------|
|                                   | Million Metric Tons |               |               |                 |                  |                  |
| <b>BEGINNING STOCKS</b>           |                     |               |               |                 |                  |                  |
| <b>WORLD TOTAL</b>                | <b>11.755</b>       | <b>8.569</b>  | <b>9.465</b>  | <b>14.611</b>   | <b>17.79</b>     | <b>19.94</b>     |
| CHINA                             | 3.585               | 2.688         | 2.087         | 6.181           | 9.61             | 11.55            |
| USA                               | 1.380               | 0.642         | 0.566         | 0.729           | 0.85             | 0.65             |
| <b>PRODUCTION</b>                 |                     |               |               |                 |                  |                  |
| <b>WORLD TOTAL</b>                | <b>22.334</b>       | <b>25.409</b> | <b>28.041</b> | <b>26.838</b>   | <b>25.74</b>     | <b>25.41</b>     |
| CHINA                             | 6.925               | 6.400         | 7.400         | 7.300           | 6.70             | 6.15             |
| INDIA                             | 5.185               | 5.865         | 6.354         | 6.095           | 6.31             | 6.31             |
| USA                               | 2.654               | 3.942         | 3.391         | 3.770           | 2.87             | 3.12             |
| PAKISTAN                          | 2.158               | 1.948         | 2.311         | 2.204           | 2.10             | 2.09             |
| BRAZIL                            | 1.194               | 1.960         | 1.877         | 1.261           | 1.64             | 1.65             |
| UZBEKISTAN                        | 0.850               | 0.910         | 0.880         | 1.000           | 0.92             | 1.00             |
| OTHERS                            | 3.369               | 4.385         | 5.828         | 5.208           | 5.20             | 5.09             |
| <b>CONSUMPTION</b>                |                     |               |               |                 |                  |                  |
| <b>WORLD TOTAL</b>                | <b>25.529</b>       | <b>24.502</b> | <b>22.796</b> | <b>23.340</b>   | <b>23.60</b>     | <b>24.54</b>     |
| CHINA                             | 10.192              | 9.580         | 8.635         | 8.290           | 7.88             | 7.80             |
| INDIA                             | 4.300               | 4.509         | 4.340         | 4.845           | 5.10             | 5.51             |
| PAKISTAN                          | 2.402               | 2.100         | 2.217         | 2.416           | 2.49             | 2.61             |
| EAST ASIA & AUSTRALIA             | 1.892               | 1.796         | 1.646         | 1.858           | 2.00             | 2.21             |
| EUROPE & TURKEY                   | 1.600               | 1.549         | 1.495         | 1.532           | 1.58             | 1.71             |
| BRAZIL                            | 1.024               | 0.958         | 0.888         | 0.887           | 0.93             | 0.93             |
| USA                               | 0.773               | 0.849         | 0.718         | 0.751           | 0.78             | 0.82             |
| CIS                               | 0.604               | 0.577         | 0.550         | 0.561           | 0.58             | 0.60             |
| OTHERS                            | 2.743               | 2.583         | 2.306         | 2.201           | 2.27             | 2.36             |
| <b>EXPORTS</b>                    |                     |               |               |                 |                  |                  |
| <b>WORLD TOTAL</b>                | <b>7.798</b>        | <b>7.686</b>  | <b>9.870</b>  | <b>10.027</b>   | <b>8.57</b>      | <b>8.02</b>      |
| USA                               | 2.621               | 3.130         | 2.526         | 2.902           | 2.29             | 2.24             |
| INDIA                             | 1.420               | 1.085         | 2.159         | 1.685           | 1.30             | 1.09             |
| AUSTRALIA                         | 0.460               | 0.545         | 1.010         | 1.345           | 1.03             | 0.74             |
| BRAZIL                            | 0.433               | 0.435         | 1.043         | 0.938           | 0.76             | 0.81             |
| CFA ZONE                          | 0.560               | 0.476         | 0.597         | 0.796           | 0.88             | 0.93             |
| UZBEKISTAN                        | 0.820               | 0.600         | 0.550         | 0.653           | 0.68             | 0.59             |
| <b>IMPORTS</b>                    |                     |               |               |                 |                  |                  |
| <b>WORLD TOTAL</b>                | <b>7.928</b>        | <b>7.725</b>  | <b>9.759</b>  | <b>9.708</b>    | <b>8.57</b>      | <b>8.02</b>      |
| CHINA                             | 2.374               | 2.609         | 5.342         | 4.426           | 3.13             | 2.17             |
| EAST ASIA & AUSTRALIA             | 1.989               | 1.825         | 1.998         | 2.264           | 2.37             | 2.36             |
| EUROPE & TURKEY                   | 1.170               | 0.972         | 0.724         | 1.015           | 0.77             | 1.01             |
| BANGLADESH                        | 0.887               | 0.843         | 0.680         | 0.593           | 0.86             | 0.85             |
| CIS                               | 0.209               | 0.132         | 0.098         | 0.062           | 0.07             | 0.07             |
| <b>TRADE IMBALANCE 1/</b>         | <b>0.130</b>        | <b>0.039</b>  | <b>-0.111</b> | <b>-0.319</b>   | <b>0.00</b>      | <b>0.00</b>      |
| <b>STOCKS ADJUSTMENT 2/</b>       | <b>-0.122</b>       | <b>-0.051</b> | <b>0.013</b>  | <b>0.000</b>    | <b>0.00</b>      | <b>0.00</b>      |
| <b>ENDING STOCKS</b>              |                     |               |               |                 |                  |                  |
| <b>WORLD TOTAL</b>                | <b>8.569</b>        | <b>9.465</b>  | <b>14.611</b> | <b>17.790</b>   | <b>19.94</b>     | <b>20.81</b>     |
| CHINA                             | 2.688               | 2.087         | 6.181         | 9.607           | 11.55            | 12.07            |
| USA                               | 0.642               | 0.566         | 0.729         | 0.848           | 0.65             | 0.71             |
| <b>ENDING STOCKS/MILL USE (%)</b> |                     |               |               |                 |                  |                  |
| <b>WORLD-LESS-CHINA 3/</b>        | <b>38</b>           | <b>49</b>     | <b>60</b>     | <b>54</b>       | <b>53</b>        | <b>52</b>        |
| <b>CHINA 4/</b>                   | <b>26</b>           | <b>22</b>     | <b>72</b>     | <b>116</b>      | <b>147</b>       | <b>155</b>       |
| <b>COTLOOK A INDEX 5/</b>         | <b>78</b>           | <b>164</b>    | <b>100</b>    | <b>88</b>       |                  |                  |

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.

# SUMMARY OF THE OUTLOOK FOR COTTON

## World Prices High Despite Excess Production

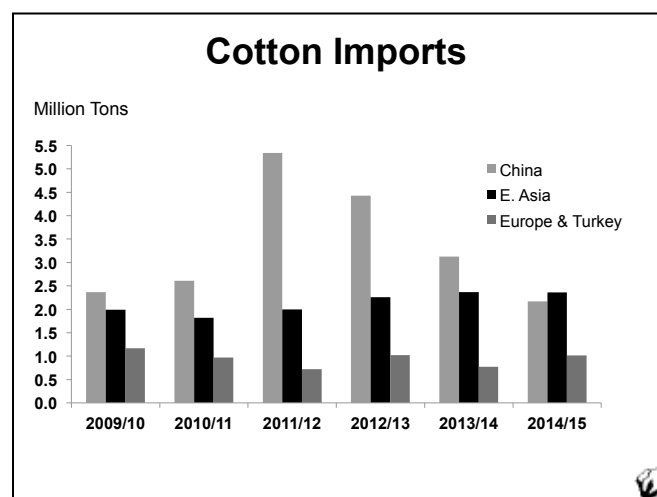
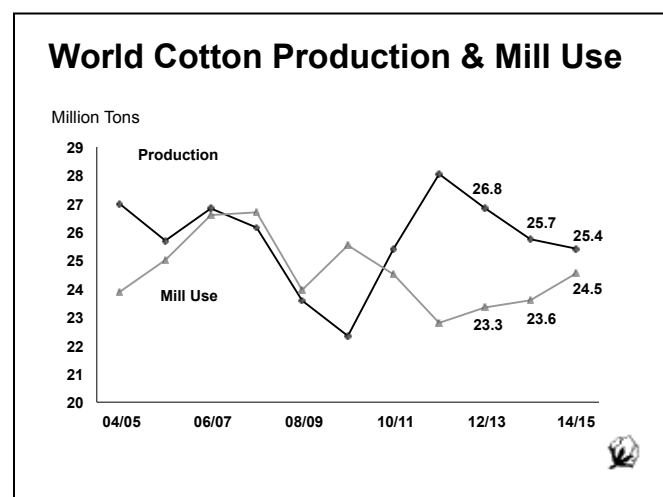
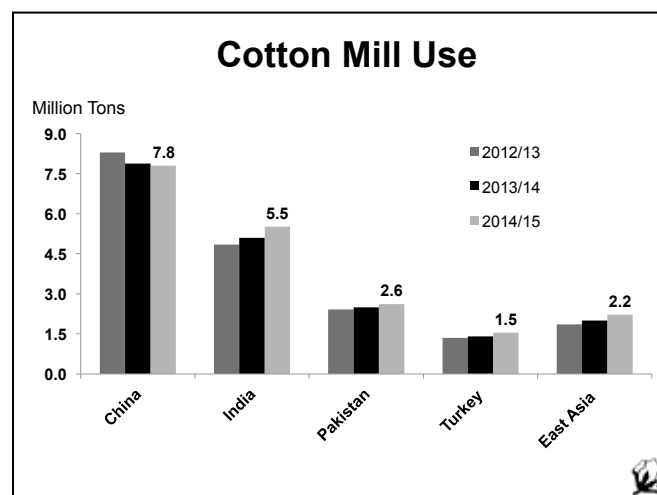
In 2010/11, world production exceeded consumption and this trend has continued into this season, though declining production and a slight rise in consumption is closing the gap. In 2013/14, world production is forecast at 25.7 million tons, a decrease of 4% from 2012/13 and 8% from peak production of 28 million tons in 2011/12. This is due principally to lower yields and less area planted with cotton. The world average yield in 2013/14 is forecast at 777 kilograms per hectare, down 2% from last season and world area is forecast at 33.1 million tons, also down 2% from last season.

Aside from India, harvesting in the northern hemisphere has mostly come to a close. Production in the northern hemisphere, which accounts for close to 90% of world production, is estimated at 22.5 million tons in 2013/14, a decrease of 7% from 2012/13. Planting in the southern hemisphere is fully underway with area under cotton forecast at 3.4 million hectares, 10% greater than in 2012/13 and production at 3.2 million tons, up from 2.7 million tons in 2012/13 due in large part to Brazil, Argentina.

World cotton mill use is projected up by 1% this season to 23.6 million tons, reversing the downward trend in cotton consumption since 2009/10. World cotton mill use should continue to grow in 2014/15 (by 4%) if the health of the global economy continues to improve. World economic growth, which is the main factor affecting end-use textile consumption and cotton mill use, is projected to further recover in 2014. The International Monetary Fund's latest projections, published in January 2014, indicate world economic growth

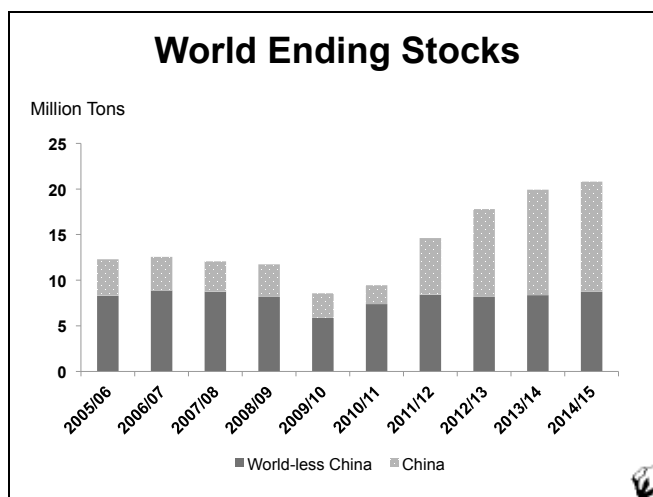
at 3.7% in 2014, up from 3.0% in 2013 and 3.1% in 2012. The IMF forecasts for 2014 are up for the United States, 2.8%, and the Euro Area, 1.0% from 2013, which traditionally have been large markets for end-use textiles and clothing. Growth in developing Asia, which is where most cotton is consumed is forecast at 6.7%, up slightly from 6.5% in 2013. In 2014, China's economic growth is expected to slow down to 7.5% from 7.7% in 2013 while India's will increase to 5.4% from 4.4% in 2013.

World cotton trade is forecast at 8.6 million tons this season. Although China is expected to be the largest importer of cotton this season, accounting for 37% of all imports, East Asia's volume of imports has been growing in the last four seasons from just under 2 million tons (25%) in 2009/10 to an expected 2.3 million tons (27%) in 2013/14. East Asia's



imports are expected to remain stable in 2014/15 at 2.4 million tons, but its share will increase to 30%, largely due to an expected decline in China's imports to 1.9 million tons. Despite a smaller crop, the United States will remain the largest exporter, with expected shipments of 2.3 million tons this season, followed by India with 1.3 million tons.

In 2013/14, world ending stocks are forecast to be 19.9 million tons, more than 2 million tons higher than last season. Despite the excess of cotton stock in the world, the Cotlook A Index for January has averaged about 91 cents per pound, up from 85 cents per pound seen in November and early December 2013. This is due in part to China's cotton policy, which has removed much of the excess cotton from the world market. Given China's share of world cotton stocks, if it decides to offload its reserve stock onto the world market, price is expected to decrease. At the end of 2013/14, China is expected to hold 58% of world stocks with an expected ending stock of 11.5 million tons. Currently, the government of China holds about 12.6 million tons. During the current season it has purchased more than 5.6 million tons and sold



just over 400,000 tons. All sales and procurement are on hold for spring holidays in China, but sales from the reserve will start again on February 7.

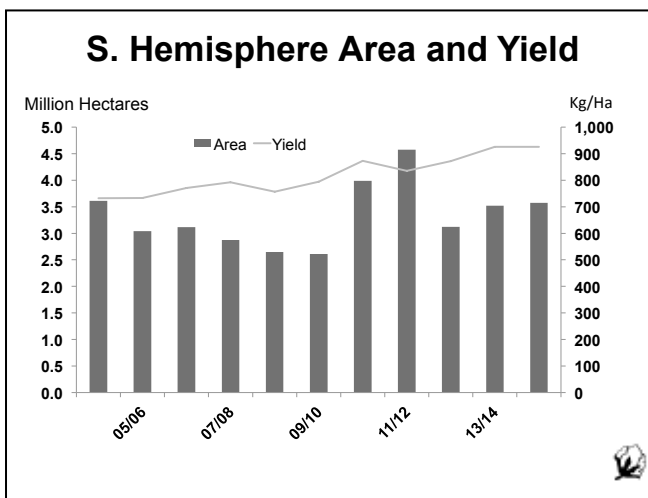
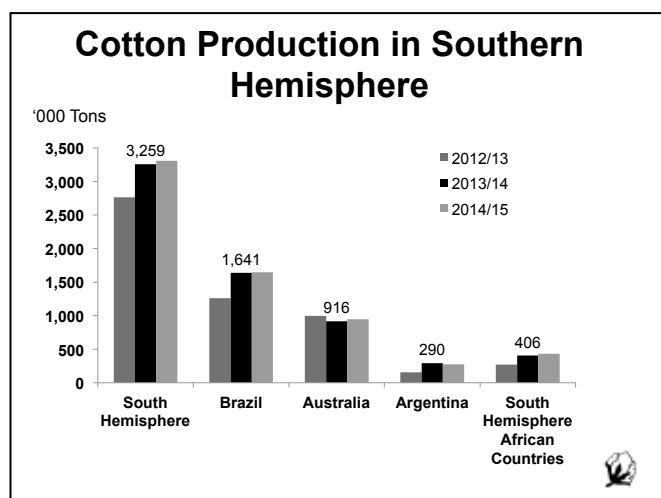
## COTTON PRODUCTION IN THE SOUTHERN HEMISPHERE

*By Rebecca Pandolph, ICAC*

Most of the southern hemisphere's 2013/14 cotton plantings took place between October 2013 and December 2013. Given the high returns received by farmers in 2012/13 and better prices for cotton relative to other crops at planting time, cotton area in the southern hemisphere is expected to increase by 13% to 3.5 million hectares. At this stage, weather is closely watched as it is a determining factor in final yields and production. Assuming a slight increase in the average yield, production in the southern hemisphere is forecast at 3.3 million tons, 20% higher than in 2012/13. The share of the Southern Hemisphere in global production is expected to

increase to 13% in 2013/14, up from 10% in 2012/13.

The increase in production in the southern hemisphere this season is driven by Brazil, where the crop could reach a record of 1.6 million tons, up 30% from last season. Production in Argentina could reach 290,000 tons this season, nearly doubling production from 2012/13. Australia's production is expected to decline by 8% to 916,000 in 2013/14 due to tight water supplies. In Eastern and Southern Africa, cotton production is forecast significantly up as many governments are encouraging producers to plant more cotton this season.



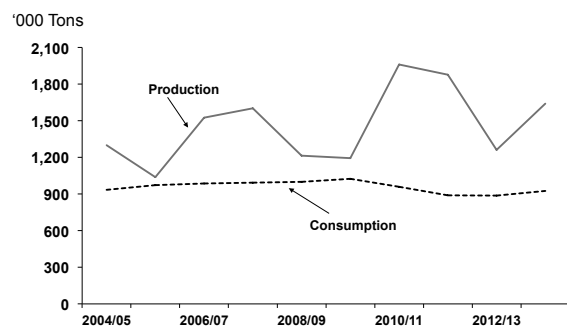
## Brazil

Cotton area in Brazil declined to 870,000 hectares in 2012/13, after two seasons of 1.4 million hectares, due to high international cotton prices at planting time in 2010/11 and 2011/12, and the large volume of forward sales already contracted.

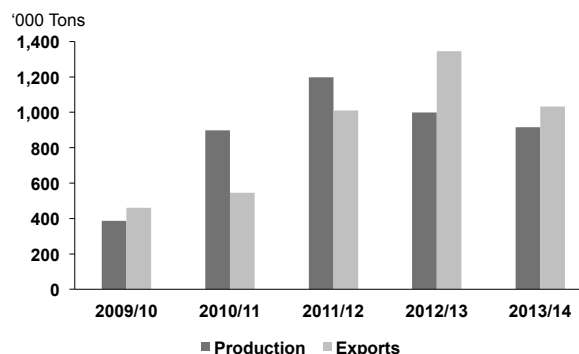
Cotton area has seen a recovery in 2013/14, reaching 1.1 million hectares. Farmers in Mato Grosso (the largest producing state) are optimistic this season due to high profits earned the previous season. Production costs were slightly lower in 2013, but are still relatively high, making cotton production riskier than other crops. Furthermore many farmers in Brazil are upset over the fact that the Brazilian government has not adjusted the guaranteed minimum price for cotton since 2003, which is now significantly below the cost of production. Despite this, expectations for good prices this season and plentiful rainfall, which will increase yields, have encouraged farmers to plant more cotton this season. Additionally, the cotton crop in 2012/13 suffered from an unexpected attack of *Helicoverpa armigera* (a bollworm), causing a loss of about U.S. \$ 4 billion. However, after national consultations and more insecticide available, farmers are better prepared this season to combat *Helicoverpa armigera*. Production in Brazil is expected to reach 1.6 million tons, an increase of 30% from 2012/13 and an increase of 9% over the 5-year average. The average yield for 2013/14 is forecast to be 1543 kilograms per hectare due to adequate soil moisture during planting and plentiful rains during the growing season.

Brazil is the fifth largest consumer of raw cotton in the world and the largest consumer of raw cotton in the southern hemisphere. Cotton mill use peaked at over one million tons in 2008/09 and 2009/10, and then trended down to about 890,000 tons for the next two seasons due to high cotton prices and a very strong real, which affects the competitiveness of the domestic textile sector. However, cotton mill use is expected to increase to 925,000 tons in 2013/14. Most of the textile industry's output is sold domestically.

### Brazil Production and Consumption



### Australia Production and Exports



Exports from Brazil are expected to decline by 19% to 764,000 tons this season, but to remain higher than the 5 year average of 689,000 tons. Imports are expected to reach 48,000 tons this season after 2 seasons of imports with volumes under 20,000 tons.

## Australia

Availability of water is an important factor for production of cotton in Australia, which farms cotton on both irrigated and dryland area. Plentiful rain in 2008 increased production from a 25-year low of 126,000 tons in 2007/08 to 387,000 tons in 2009/10, and jumped to a record of 1.2 million tons in 2011/12 in response to high cotton prices in the first half of 2011 and adequate availability of irrigation water. In 2012/13, production declined to 999,000 tons due to lower world prices for cotton at planting time.

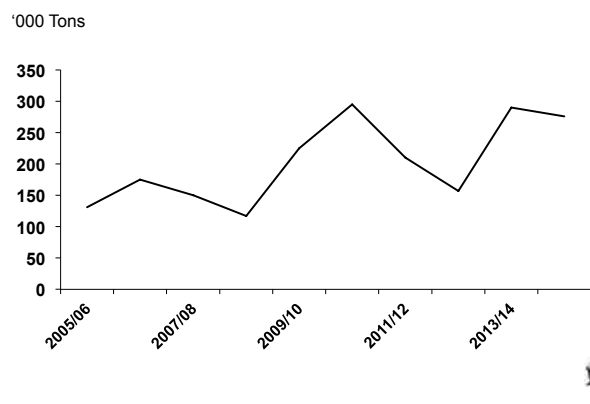
In 2013/14, world prices for cotton were slightly higher compared to last season at planting time. As a result, total cotton area is expected to increase by 3% to 433,000 hectares. However, rainfall is greatly needed to restore soil moisture levels and replenish low reserves in public irrigation dams if yield is to remain high. As a result, total cotton production is expected to decrease by 8% to 916,000 tons. Most of this cotton will be harvested between March and May 2014.

Australia exports nearly all the cotton it produces. 2013/14 exports are expected to reach just over 1 million tons, a decrease of 23% from 2012/13 due to a smaller crop. However, this is almost double the ten-year average of 588,000 tons for exports.

## Argentina

Cotton area in Argentina is expected to reach 600,000 hectares in 2013/14, 40% greater than cotton area in 2012/13 and 30% greater than the average cotton area for the last five seasons due to very favorable weather at planting and poor results for other crops grown this season. Yield this season is expected to increase to 483 kg/ha up from 434 kg/ha in 2012/13 due to plentiful rains combined with warm weather in January.

### Cotton Production in Argentina

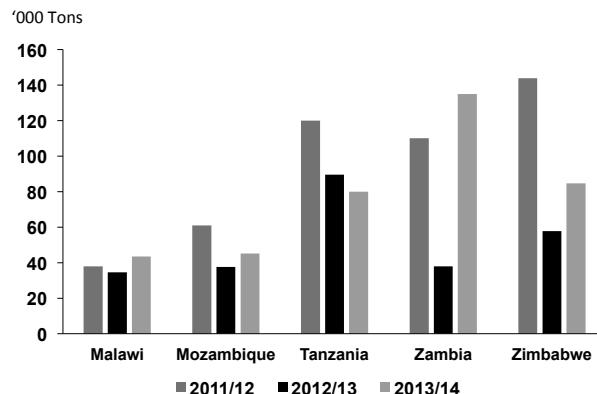


Production is projected at 290,000 tons, up from 157,000 tons produced in 2012/13. This would be the second highest level of production in the last 15 years after 2010/11, which reached 295,000 tons. Cotton mill use is expected to remain stable at 142,000 tons in 2013/14, most of it for the domestic market.

### Other South American Countries

Cotton production in the rest of South America is forecast down by 3% to 87,000 tons in 2013/14, due to a decrease in area. In 2013/14, production in Peru is expected to be 38,000, continuing its decline from 46,000 tons reached in 2010/11. Cotton production in Colombia is forecast up by 40% to 35,000 tons and just below its 10-year average of 39,000 tons. This would be the largest crop in six years. Production in Paraguay has declined from 26,000 tons in 2012/13 to an expected 11,000 tons in 2013/14 due to a decrease in area of 64% to 25,000 hectares.

### Cotton Production in Southern Africa



### Southern African Countries

Cotton area in Eastern and Southern Africa is expected to increase by 3% to 761,000 hectares in 2013/14, driven by an expansion in plantings. Cotton production in the region is expected to increase this season to 406,000 tons from 273,000 tons in 2012/13 due to the larger area and better expected yields in some countries. Production in Zimbabwe is projected to increase significantly from 58,000 tons to 85,000 tons in 2013/14 due to larger area planted with cotton and sufficient rainfall at the early stages of growth. Production in Tanzania is expected to decline by 11% to 80,000 tons<sup>1</sup>. Production in Zambia could increase significantly to 135,000 tons due to farmers replanting on more area after the arrival of much needed rainfall in late December. Malawi's production could continue to recover to 43,000 tons. Mozambique production is projected slightly higher at 45,000 tons due to support by the Mozambique Institute for Cotton, which has allocated technicians to mobilize farmers to plant cotton and increase production this season.

## COTTON PRICE FORECASTS UNDER ALTERNATIVE SCENARIOS

*By Alejandro Plastina and Rebecca Pandolph, ICAC*

### The 2007 Price Model

This article reviews the methodology used by the ICAC Secretariat to forecast cotton prices. The first section summarizes the price model implemented between 2007 and 2011. The second section explains the current price model and presents forecasts for 2013/14 and 2014/15. The third section presents forecasts under alternative scenarios, namely a fast release of the Chinese reserve, a slow release of the Chinese reserve, and a slowdown in cotton demand.

The ICAC Secretariat has been forecasting season-average cotton prices since 1988. In 2007, after two seasons of unsatisfactory forecasting results, the Secretariat adopted a new econometric model, based on fundamental factors of the world cotton economy, which is explained in detail at <<http://www.icac.org/econ/Price-Model>>. The model uses four explanatory variables, which are themselves combinations

<sup>1</sup> In Tanzania, cotton is planted between mid-November and mid-December, and harvested in May-June of the following year. The Secretariat considers that cotton planted between mid-November and mid-December 2013 belongs to the 2013/14 season

of estimates and projections of stocks and mill use, trade, and judgment on whether Chinese trade is dominated by government actions or by private activity:

$$\ln(A_t/A_{t-1}) = a \cdot \ln(X_t/X_{t-1}) + b \cdot \ln(X_{t-1}/X_{t-2}) + m_t \cdot c \cdot \ln(Y_{t-1}/Y_{t-2}) + (1-m_t) \cdot d \cdot \ln(Z_t/Z_{t-1}) \quad (1)$$

where  $A_t$  is the average value of the Cotlook A Index in season  $t$ ;  $X_t$  represents ending stocks as a percentage of mill use in season  $t$  for the world minus China;  $Y_{t-1}$  represents ending stocks as a percentage of mill use in season  $t-1$  for China;  $Z_t$  equals  $100 \cdot (1 - \text{net imports into China/world imports})$ ;  $m_t$  is a dummy variable equal to 0 for 1991/92 through 2002/03, 2008/09 through 2009/10, and 2011/12 through 2013/14 and 1 for all other seasons; and  $a$ ,  $b$ ,  $c$ , and  $d$  are the parameters to be estimated. The dummy variable indicates whether changes in Chinese stocks are mainly motivated by policy decisions ( $m_t = 0$ ) or changes in market conditions ( $m_t = 1$ ).

The model assumes all explanatory variables are given (even though some are projections) and finds the price that would need to exist in order to support the levels of the explanatory variables. This single equation model does not retro-fit the impact of prices on the other variables, neither does it directly account for the impact of variables outside the model (such as the price for polyester or other competing fibers, economic growth, or inflation).

The goodness of fit of the model, *i.e.*, how well the model “explains” prices, is measured by the coefficient of determination ( $R^2$ ). If the goodness of fit is 1.0, the model “explains” all changes in prices, while if the goodness of fit is 0.0, the model cannot “explain” changes in prices at all. The goodness of fit of the model declined from 0.885 in August 2007 to 0.803 in April 2011 (figure 1), when model results became highly unsatisfactory within an environment of record-high-volatility.

## The Expanded Model

The Secretariat conducted a series of statistical tests on how to improve the explanatory power of the model. No variable was

found to add explanatory power to the model by correlating with cotton prices in 2007/08, 2009/10 and 2010/11 and not correlating with the other explanatory variables. By adding dummy variables for 2007/08 (D07), 2009/10 (D09) and 2010/11 (D10) to the ICAC Price Model, the explanatory power of the “expanded model” increases substantially. However, this tweak of the model does not improve its predicting power, and virtually the same forecast of the season-average Cotlook A Index is obtained with or without the dummy variables. Formally, the expanded model is:

$$\ln(A_t/A_{t-1}) = a \cdot \ln(X_t/X_{t-1}) + b \cdot \ln(X_{t-1}/X_{t-2}) + m_t \cdot c \cdot \ln(Y_{t-1}/Y_{t-2}) + (1-m_t) \cdot d \cdot \ln(Z_t/Z_{t-1}) + e \cdot D07 + f \cdot D09 + g \cdot D10 \quad (2)$$

Similarly to the previous model, the expanded model can be used to produce same-season forecasts and one-season ahead forecasts.

In February 2012, the expanded model forecasted a 2011/12 season-average A Index ranging from US\$1.15 to US\$1.43 with a midpoint of US\$1.28, while the actual 2011/12 season-average A Index amounted to US\$1.00 per pound. The main drivers of the error were the differences between the projected and the realized 2011/12 levels of Chinese imports (3.3 million tons vs. 5.3 million tons), mill use in the world minus China (14.5 million tons vs. 13.5 million tons), and ending stocks in the world minus China (8.6 million tons vs. 9.1 million tons).

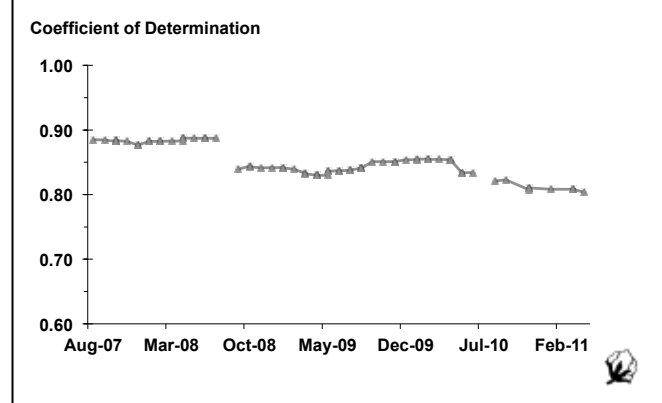
The forecast presented to the 521<sup>st</sup> Meeting of the ICAC Standing Committee on December 13, 2012 for 2012/13 was 84 cents per pound, with a 95% confidence interval ranging from 70 cents to 103 cents. The 2012/13 season concluded with the actual season-average A Index at 88 cents per pound. The main drivers of the error were the differences between the projected and the realized 2012/13 levels of Chinese imports (2.57 million tons vs. 4.4 million tons) and ending stocks in the world minus China (9.6 million tons vs. 8.2 million tons).

## 2013/14 Season Forecast

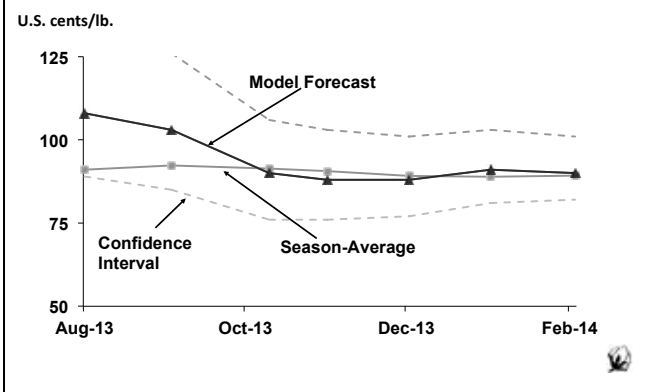
As of January 2, 2014, the expanded model forecasts the A Index to average 91 cents per pound in 2013/14, with a 95% confidence interval ranging from 81 cents to 103 cents. It assumes that the ending stocks-to-mill use ratio in the world minus China will fall slightly from 54% in 2012/13 to 53% in 2013/14, and that Chinese imports will fall by 30% from 4.4 million tons in 2012/13 to 3.1 million tons in 2013/14. Furthermore, the forecast of 91 cents is a weighted average of the raw forecast from the model and the average A Index observed since the beginning of the season. The confidence interval is also adjusted periodically to reflect the additional information about the realized values of the A Index since the previous forecast. Figure 2 illustrates the evolution of the A Index and the same-season forecasts since then.

The fitted parameters of the expanded model to data from 1975/76 to 2013/14 (Appendix 1) are reported in Table 1. The coefficient of determination, *i.e.*, the goodness of fit of the model, is 0.860. The statistical fit is good as shown in Figure 3.

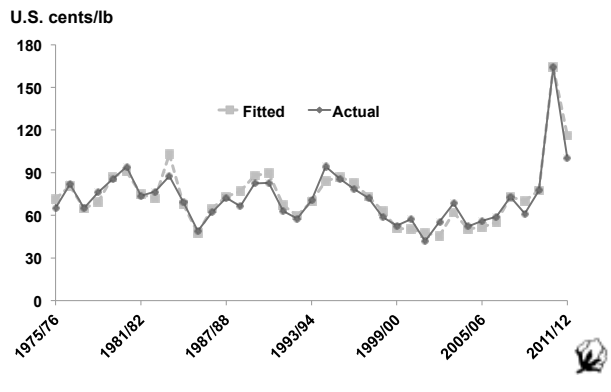
**Figure 1. Goodness of Fit of the Model, by Date of Publication**



**Figure 2. A Index in 2013/14: Forecast versus Actual, Ordered by Publication Date**



**Figure 3. Fitted and Actual Values of the Cotlook A Index, 1975/76 – 2012/13**



According to Table 1 below, the change in the stocks-to-mill use ratio for the world less China in season  $t$ ,  $\ln(X_t/X_{t-1})$ , is the most important explanatory variable. With an elasticity coefficient of -1.2, a 5% increase in the stocks-to-mill use ratio in the world less China induces a 6% price decline in the same season. The second most important explanatory variable is the change in the stocks-to-mill use ratio for the world less China in season  $t-1$ ,  $\ln(X_{t-1}/X_{t-2})$ : with an elasticity coefficient of -0.46, a 5% increase in the stocks-to-mill use ratio in the world less China in the preceding season induces a 2.3% price decline in the current season. Consequently, if the stocks-to-mill use ratio in the world less China increases by 5% in season  $t-1$  and again by 5% in season  $t$ , the Cotlook A Index will fall, on average, by 8.3% in season  $t$ .

The dummy variables D07, D09 and D10 are all significant at the 5% level and account for most of the changes in the A Index in 2007/08, 2009/10, and 2010/11. The variables that attempt to capture changes in the market fundamentals and government decisions in China,  $mt \cdot \ln(Y_t/Y_{t-2})$  and  $(1-mt) \cdot \ln(Z_t/Z_{t-1})$ , are not significant at the 10% level, but are kept in the model because the fit of the model to the data is better with them than without them: the Akaike Information Criteria is greater (in absolute value) with the variables than without them (1.787 vs 1.779). A 5% increase in the Chinese

stocks-to-mill use ratio would only induce a 0.2% decline in world prices in the following season. Finally, during seasons when changes in Chinese stocks were mainly driven by government decisions instead of market forces, increases in net imports into China resulted in increases in cotton prices during the same season; for example, if net imports into China increased from zero to 5% of world gross imports, the value of the explanatory variable  $Z$  would fall from 100 to 95 and the A Index would increase by 1.7%.

### 2014/15 Season Forecast (Base Scenario)

In the scenarios discussed below, we are forecasting the season-average Cotlook A Index for the 2014/15 season. However, the 2013/14 forecast serves as the basis to forecast the 2014/15 season average. The fitted parameters of the expanded model to data from 1975/76 to 2013/14, assuming the true A Index in 2013/14 is 89 cents per pound, are reported in Table 2. The coefficient of determination, *i.e.*, the goodness of fit of the model, is 0.860. The fitted value for the A Index in 2013/14 is 91 cents, or 2 cents higher than the reference value.

Fitted parameters in table 2 are very similar to those in table 1. However, the variable capturing the effect of net imports into China due to government decisions,  $\ln(Z_t/Z_{t-1})$ , becomes significant at the 5% level.

**Table 1. Estimated Coefficients of the Extended Model, 1975/76-2011/12**

| Explanatory Variable | $\ln(X_t/X_{t-1})$ | $\ln(X_{t-1}/X_{t-2})$ | $mt \cdot \ln(Y_t/Y_{t-2})$ | $(1-mt) \cdot \ln(Z_t/Z_{t-1})$ | D07   | D09   | D10   |
|----------------------|--------------------|------------------------|-----------------------------|---------------------------------|-------|-------|-------|
| Fitted Parameter     | -1.202             | -0.462                 | -0.045                      | -0.332                          | 0.203 | -0.25 | 0.858 |
| t-statistic          | -10.87             | -4.66                  | -1.02                       | -1.54                           | 2.22  | -2.39 | 8.39  |

**Table 2. Estimated Coefficients of the Extended Model, 1975/76-2013/14**

| Explanatory Variable | $\ln(X_t/X_{t-1})$ | $\ln(X_{t-1}/X_{t-2})$ | $mt \cdot \ln(Y_t/Y_{t-2})$ | $(1-mt) \cdot \ln(Z_t/Z_{t-1})$ | D07   | D09    | D10  |
|----------------------|--------------------|------------------------|-----------------------------|---------------------------------|-------|--------|------|
| Fitted Parameter     | -1.204             | -0.514                 | -0.045                      | -0.218                          | 0.205 | -0.239 | 0.91 |
| t-statistic          | -9.87              | -5                     | -0.95                       | -1.05                           | 2.08  | -2.14  | 8.16 |



Assuming that in 2014/15 (a) world cotton mill use will increase by 807,000 tons to 24.6 million tons despite a 241,000 tons decline in Chinese mill use, (b) ending stocks will increase by 553,000 tons in the world and by 86,000 tons in China, (c) international trade will decline by 686,000 tons where a 1.2 million tons reduction in Chinese imports is offset primarily by imports in the rest of Asia, then the forecast of the season-average A Index for 2014/15 ranges from 74 cents to 111 cents, with a midpoint at 90 cents per pound.

At that level, international cotton prices would be competitive with domestic cotton prices in China if the import duty is low. Adding 18% to 90 cents to account for taxes and fees applied to imported cotton into China, the resulting 106 cents are 28 cents below the average Chinese reserve selling price of 18,000 yuan per ton (or 134.1 cents per pound assuming an exchange rate of 6.089 yuan per US dollar). However, if a 40% tariff is applied, the resulting price would be 142 cents, which is 8 cents higher and not competitive with domestic cotton prices in China. Therefore, out of quota imports would not be competitive with domestic prices with a 40% tariff.

## Forecasts Under Alternative Scenarios

Given the structure of the expanded model, the following forecasts are based on different assumptions about the explanatory variables. The ICAC Secretariat first chooses reasonable estimates (for past seasons) and forecasts (for the current and the following season) of ending stocks, mill use, imports and exports; then makes a judgment about the impact of government policy on Chinese stocks; and finally runs the price model to obtain the price forecast. The price forecast is not retro-fitted into the model to analyze its impact on the explanatory variables.

Given that most of the variability of price forecasts through time stem from the variability inherent in the estimates and forecasts of the explanatory variables (since coefficient estimates change very little through time) (Plastina 2012), it seems reasonable to analyze alternative scenarios by changing

the levels of the explanatory variables and comparing the resulting price forecast with the Base Scenario described in the previous section. As China is expected to change its cotton policy in the next season, the focus of the analysis is 2014/15.

### Scenario 1: Fast Release of Chinese Reserve and China Remains Net Importer

In this scenario, the Chinese government is assumed to liquidate reserves at prices lower than those at which the cotton was purchased, until reaching a target 5.5 million tons in stock. This would result in considerable losses for the Chinese government, but in substantial support for Chinese textile mills.

Ending stocks in the Chinese private sector are assumed at 1 million tons. Therefore, total ending stocks in China in 2014/15 are assumed at 6.5 million tons, or 5 million tons lower than in the base scenario. It is assumed that liquidated cotton from the reserve would displace 1.5 million tons of imported cotton and create an additional 3.5 million tons of mill use in China.

Mill use would amount to 11.3 million tons in China, and 17.3 million tons in the world less China (500,000 tons higher than in the base scenario because the 1 million tons of additional stocks outside China would put downward pressure on prices and stimulate additional cotton consumption). World mill use would reach 28.5 million tons. Imports by China would amount to 444,000 tons, and world imports would reach 6.3 million tons. World ending stocks would amount to 16.9 million tons, or 4 million tons lower than in the base scenario. Table 3 compares the assumed levels of mill use, ending stocks and trade in Scenario 1 with those from the Base Scenario.

Under Scenario 1, the forecast of the 2014/15 season-average A Index ranges from 68 cents to 102 cents, with a midpoint at 83 cents per pound. Therefore, under this scenario, there is a 62% chance that prices will decline in 2014/15.

### Scenario 2: Fast Release of Chinese Reserve and China Becomes a Net Exporter

This scenario is similar to Scenario 1 in that the Chinese government is assumed to liquidate reserves at lower prices until reaching a target 5.5 million tons in stock. The main difference stems from the assumption about how liquidated cotton affects Chinese mill use and trade. In Scenario 2, liquidated cotton is assumed to create an additional 1.5 million tons of mill use in China (instead of 3.5 million tons assumed in Scenario 1), generate 2 million tons of exports by China, and displace 1.5 million tons of imported cotton into China.

Table 3. Fundamentals in 2014/15 Under Scenario 1 and Base Scenario

| Region               | Variable      | Base Scenario<br>(in thousand tons) | Scenario 1<br>(in thousand tons) | Difference<br>(in thousand tons) |
|----------------------|---------------|-------------------------------------|----------------------------------|----------------------------------|
| China                | Imports       | 1,944                               | 444                              | -1,500                           |
|                      | Mill Use      | 7,800                               | 11,269                           | 3,469                            |
|                      | Exports       | 7                                   | 7                                | 0                                |
|                      | Ending Stocks | 11,469                              | 6,500                            | -4,969                           |
| World<br>Minus China | Imports       | 5,806                               | 5,806                            | 0                                |
|                      | Mill Use      | 16,774                              | 17,274                           | 500                              |
|                      | Exports       | 7,759                               | 6,259                            | -1,500                           |
|                      | Ending Stocks | 9,400                               | 10,400                           | 1,000                            |
| World Total          | Imports       | 7,749                               | 6,249                            | -1,500                           |
|                      | Mill Use      | 24,573                              | 28,542                           | 3,969                            |
|                      | Exports       | 7,766                               | 6,266                            | -1,500                           |
|                      | Ending Stocks | 20,869                              | 16,900                           | -3,969                           |

**Table 4. Fundamentals in 2013/14 Under Scenario 2 and Base Scenario**

| Region      | Variable      | Base Scenario<br>(in thousand tons) | Scenario 2<br>(in thousand tons) | Difference<br>(in thousand tons) |
|-------------|---------------|-------------------------------------|----------------------------------|----------------------------------|
| China       | Imports       | 1,944                               | 444                              | -1,500                           |
|             | Mill Use      | 7,800                               | 9,269                            | 1,469                            |
|             | Exports       | 7                                   | 2,007                            | 2,000                            |
|             | Ending Stocks | 11,469                              | 6,500                            | -4,969                           |
| World       | Imports       | 5,806                               | 7,806                            | 2,000                            |
| Minus China | Mill Use      | 16,774                              | 17,274                           | 500                              |
|             | Exports       | 7,759                               | 6,259                            | -1,500                           |
|             | Ending Stocks | 9,400                               | 12,400                           | 3,000                            |
| World Total | Imports       | 7,749                               | 8,249                            | 500                              |
|             | Mill Use      | 24,573                              | 26,542                           | 1,969                            |
|             | Exports       | 7,766                               | 8,266                            | 500                              |
|             | Ending Stocks | 20,869                              | 18,900                           | -1,969                           |

**Table 5. Fundamentals in 2013/14 Under Scenario 3 and Base Scenario**

| Region      | Variable      | Base Scenario<br>(in thousand tons) | Scenario 3<br>(in thousand tons) | Difference<br>(in thousand tons) |
|-------------|---------------|-------------------------------------|----------------------------------|----------------------------------|
| China       | Imports       | 1,944                               | 1,000                            | -944                             |
|             | Mill Use      | 7,800                               | 7,800                            | 0                                |
|             | Exports       | 7                                   | 7                                | 0                                |
|             | Ending Stocks | 11,469                              | 10,525                           | -944                             |
| World       | Imports       | 5,806                               | 5,806                            | 0                                |
| Minus China | Mill Use      | 16,774                              | 16,774                           | 0                                |
|             | Exports       | 7,759                               | 6,815                            | -944                             |
|             | Ending Stocks | 9,400                               | 10,344                           | 944                              |
| World Total | Imports       | 7,749                               | 6,805                            | -944                             |
|             | Mill Use      | 24,573                              | 24,573                           | 0                                |
|             | Exports       | 7,766                               | 6,822                            | -944                             |
|             | Ending Stocks | 20,869                              | 20,869                           | 0                                |

Ending stocks in the Chinese private sector are assumed at 1 million tons and total ending stocks in China are assumed at 6.5 million tons in 2014/15. Mill use would amount to 9.3 million tons in China, and 17.3 million tons in the world less China (500,000 tons higher than in the base scenario because the 3 million additional stocks outside China and the 2 million tons exported by China would put downward pressure on prices and stimulate additional cotton consumption). World mill use would reach 26.5 million tons. Imports by China would amount to 444,000 tons, China would become a net exporter, and world imports would reach 8.3 million tons. World ending stocks would amount to 18.9 million tons, or 2 million tons lower than in the base scenario. Table 4 compares the assumed levels of mill use, ending stocks and trade in Scenario 2 with those from the Base Scenario.

Under Scenario 2, the forecast of the 2014/15 season-average A Index ranges from 54 cents to 80 cents, with a midpoint at 66 cents per pound. Therefore, under this scenario, prices would decline with certainty in 2014/15.

### Scenario 3: Slow Release of Chinese Reserve

In this scenario, the Chinese government is assumed to liquidate reserves at prices that would result in an annual stock

reduction of 1 million tons. Furthermore, it is assumed that the Chinese government would allow textile mills to import one bale out-of-quota for every three bales of cotton bought from the reserve.

It is assumed that the extra 1 million tons of cotton available from the liquidated reserves is absorbed by domestic mills, displacing 1 million tons of imported in-quota cotton. However, Chinese imports of out-of-quota cotton would increase by 56,000 tons, resulting in a net decline in Chinese imports of 944,000 tons.

Since mill use is assumed unchanged from the base scenario, the 944,000 tons not exported to China would add to ending stocks in the rest of the world. Table 5 compares the assumed levels of mill use, ending stocks and trade in Scenario 3 with those in the Base Scenario.

Under Scenario 3, the forecast of the 2014/15 season-average A Index ranges from 66 cents to 99 cents, with a midpoint at 81 cents per pound. Therefore, under this scenario, there is a 70% chance that prices will decline in 2014/15.

## Concluding Remarks

As with all models, the model used by the ICAC Secretariat is limited by construction to reflect the impact of a few explanatory variables on some dependent variable. The variability of forecasts from the ICAC price model is mainly explained by the variability of its explanatory variables, in particular the projected changes in stocks and mill use outside China. Therefore, price forecasts ultimately depend on the Secretariat's forecasts of those variables.

As an attempt to better inform readers about the consequences of changes in policies or the economic environment on price forecasts, three scenarios are presented in this article: a fast release of the Chinese reserve with China remaining a net importer or becoming a net exporter, and a slow release of the Chinese reserve. Across scenarios, the role of China's cotton policy, particularly the release of its reserves, as the main driver of prices is significant. Even when China chooses a slower release of reserves, as outlined in the third scenario, the surplus of cotton on the market has a dampening effect on prices.

### Reference

Plastina, A. 2012. "Update on the ICAC Price Model," *Cotton: Review of the World Situation* 65(3) p.8-12.



## Appendix 1. Basic Data 1970/71 Through 2013/14

| Season         | A         | X            | Y             | Z            | $\ln(A_t/A_{t-1})$ | $\ln(X_t/X_{t-1})$ | $\ln(Y_t-1/Y_{t-2})$ | $\ln(Z_t/Z_{t-1})$ | D07      | D09      | D10      |
|----------------|-----------|--------------|---------------|--------------|--------------------|--------------------|----------------------|--------------------|----------|----------|----------|
| 1970/71        | 31.1      | 41.28        | 20.43         | 97.88        |                    |                    |                      |                    | 0        | 0        | 0        |
| 1971/72        | 37.2      | 41.67        | 19.81         | 96.78        | 0.178              | 0.009              | -0.031               | -0.011             | 0        | 0        | 0        |
| 1972/73        | 42        | 45.5         | 22.13         | 90.9         | 0.122              | 0.088              | 0.111                | -0.063             | 0        | 0        | 0        |
| 1973/74        | 76.5      | 44.91        | 32.5          | 91.64        | 0.601              | -0.013             | 0.384                | 0.008              | 0        | 0        | 0        |
| 1974/75        | 52.5      | 64.31        | 34.75         | 97.1         | -0.376             | 0.359              | 0.067                | 0.058              | 0        | 0        | 0        |
| 1975/76        | 65.3      | 43.23        | 43.47         | 96.9         | 0.218              | -0.397             | 0.224                | -0.002             | 0        | 0        | 0        |
| 1976/77        | 81.9      | 41.91        | 31.11         | 98.38        | 0.226              | -0.031             | -0.335               | 0.015              | 0        | 0        | 0        |
| 1977/78        | 65.1      | 52.13        | 18.49         | 93.16        | -0.23              | 0.218              | -0.52                | -0.055             | 0        | 0        | 0        |
| 1978/79        | 76.1      | 46.35        | 8.15          | 89.7         | 0.156              | -0.117             | -0.819               | -0.038             | 0        | 0        | 0        |
| 1979/80        | 85.4      | 44.74        | 9.82          | 82.34        | 0.116              | -0.035             | 0.186                | -0.086             | 0        | 0        | 0        |
| 1980/81        | 94.2      | 42.83        | 14.44         | 83.06        | 0.098              | -0.044             | 0.385                | 0.009              | 0        | 0        | 0        |
| 1981/82        | 73.8      | 51.93        | 10.67         | 89.14        | -0.244             | 0.193              | -0.303               | 0.071              | 0        | 0        | 0        |
| 1982/83        | 76.7      | 49.93        | 15.34         | 94.94        | 0.038              | -0.039             | 0.364                | 0.063              | 0        | 0        | 0        |
| 1983/84        | 87.7      | 39.1         | 51.34         | 100.45       | 0.134              | -0.244             | 1.208                | 0.056              | 0        | 0        | 0        |
| 1984/85        | 69.2      | 51.01        | 124.49        | 104.24       | -0.237             | 0.266              | 0.886                | 0.037              | 0        | 0        | 0        |
| 1985/86        | 49        | 61.16        | 91.33         | 112.73       | -0.344             | 0.181              | -0.31                | 0.078              | 0        | 0        | 0        |
| 1986/87        | 62.1      | 45.7         | 44.85         | 112.45       | 0.236              | -0.291             | -0.711               | -0.003             | 0        | 0        | 0        |
| 1987/88        | 72.3      | 45.75        | 32.93         | 109.56       | 0.153              | 0.001              | -0.309               | -0.026             | 0        | 0        | 0        |
| 1988/89        | 66.4      | 43.95        | 26.73         | 100.73       | -0.086             | -0.04              | -0.209               | -0.084             | 0        | 0        | 0        |
| 1989/90        | 82.4      | 35.54        | 24.77         | 95.96        | 0.217              | -0.213             | -0.076               | -0.048             | 0        | 0        | 0        |
| 1990/91        | 82.9      | 36.04        | 37.61         | 94.68        | 0.006              | 0.014              | 0.418                | -0.013             | 0        | 0        | 0        |
| 1991/92        | 63.1      | 42.58        | 76.12         | 96.55        | -0.274             | 0.167              | 0.705                | 0.02               | 0        | 0        | 0        |
| 1992/93        | 57.7      | 41.12        | 66.28         | 101.69       | -0.089             | -0.035             | -0.138               | 0.052              | 0        | 0        | 0        |
| 1993/94        | 70.6      | 35.75        | 47.79         | 99.82        | 0.202              | -0.14              | -0.327               | -0.019             | 0        | 0        | 0        |
| 1994/95        | 94.3      | 33.86        | 69.78         | 86.94        | 0.289              | -0.054             | 0.379                | -0.138             | 0        | 0        | 0        |
| 1995/96        | 85.6      | 36.81        | 97.55         | 88.62        | -0.097             | 0.083              | 0.335                | 0.019              | 0        | 0        | 0        |
| 1996/97        | 78.6      | 36.88        | 109.3         | 87.21        | -0.086             | 0.002              | 0.114                | -0.016             | 0        | 0        | 0        |
| 1997/98        | 72.2      | 38.41        | 128.84        | 93.1         | -0.084             | 0.041              | 0.164                | 0.065              | 0        | 0        | 0        |
| 1998/99        | 58.9      | 41.25        | 135.45        | 101.31       | -0.204             | 0.071              | 0.05                 | 0.084              | 0        | 0        | 0        |
| 1999/00        | 52.8      | 44.72        | 94.21         | 105.68       | -0.109             | 0.081              | -0.363               | 0.042              | 0        | 0        | 0        |
| 2000/01        | 57.2      | 45.87        | 71.41         | 100.78       | 0.08               | 0.025              | -0.277               | -0.048             | 0        | 0        | 0        |
| 2001/02        | 41.8      | 53.19        | 57.87         | 99.62        | -0.314             | 0.148              | -0.21                | -0.012             | 0        | 0        | 0        |
| 2002/03        | 55.4      | 47.78        | 37.96         | 91.96        | 0.282              | -0.107             | -0.422               | -0.08              | 0        | 0        | 0        |
| 2003/04        | 68.3      | 46.1         | 33.91         | 73.87        | 0.209              | -0.036             | -0.113               | -0.219             | 0        | 0        | 0        |
| 2004/05        | 52.2      | 60.38        | 31.59         | 81.04        | -0.269             | 0.27               | -0.071               | 0.093              | 0        | 0        | 0        |
| 2005/06        | 56.2      | 55.22        | 42.28         | 56.26        | 0.073              | -0.089             | 0.292                | -0.365             | 0        | 0        | 0        |
| 2006/07        | 59.2      | 57.27        | 34.46         | 72.15        | 0.052              | 0.037              | -0.205               | 0.249              | 0        | 0        | 0        |
| 2007/08        | 72.9      | 56.61        | 30.46         | 70.75        | 0.209              | -0.012             | -0.123               | -0.02              | 1        | 0        | 0        |
| 2008/09        | 61.2      | 57.25        | 38.69         | 77.37        | -0.175             | 0.011              | 0.239                | 0.089              | 0        | 0        | 0        |
| 2009/10        | 77.5      | 39.07        | 26.37         | 70.12        | 0.237              | -0.382             | -0.383               | -0.098             | 0        | 1        | 0        |
| 2010/11        | 164.1     | 53.33        | 21.78         | 66.62        | 0.75               | 0.311              | -0.191               | -0.051             | 0        | 0        | 1        |
| 2011/12        | 100       | 63.62        | 71.58         | 45.39        | -0.495             | 0.176              | 1.19                 | -0.384             | 0        | 0        | 0        |
| 2012/13        | 88        | 58.67        | 115.89        | 54.53        | -0.128             | -0.081             | 0.482                | 0.183              | 0        | 0        | 0        |
| <b>2013/14</b> | <b>91</b> | <b>56.81</b> | <b>141.56</b> | <b>63.05</b> | <b>0.033</b>       | <b>-0.032</b>      | <b>0.2</b>           | <b>0.145</b>       | <b>0</b> | <b>0</b> | <b>0</b> |

f. Forecasts as of December 27, 2013 in bold.

 $A_t$  = average value of the Cotlook A Index in current U.S. cents/pound in season t. $X_t$  = ending stocks as a percentage of mill use in season t for the world minus China. $Y_{t-1}$  = ending stocks as a percentage of mill use in season t-1 for China. $Z_t$  =  $100 * (1 - \text{net imports into China/world imports})$ .

# THE STRUCTURE OF THE WORLD COTTON TRADE

*By Andrei Guitchounts, ICAC*

The world cotton trade operated in conditions of price stability during the past two seasons, marking a return to relative “normalcy” after experiencing extreme price volatility in 2010/11. Record market volatility had a profound negative effect on the world cotton trade, triggering a record number of contract defaults, as a result of increasing counter-party risks and financial stress caused by limited availability, as well as raising costs of trade finance and hedging.

The tighter credit environment confronting many cotton merchants in the aftermath of very volatile markets had a significant effect on the structure of world cotton trade. Many merchants incurred substantial losses during the past three years, and a number of cotton firms of all sizes were forced into bankruptcy, merger or closure. The departed companies were mostly mono-commodity, family-owned and family-operated businesses. Market concentration continued to increase, and multi-commodity trading houses with wider access to resources have become more prominent in cotton trading.

A stable market situation resulted in a reduction of defaults and arbitration cases during 2013, when the number of applications for technical arbitration filed with the International Cotton Association (ICA) declined to 76 cases, compared with 247 in 2012 and 242 in 2011. The ICA is projecting that about 70 new cases will be filed during calendar 2014. This number of arbitrations is closer to levels recorded before 2011. Between 2005 and 2010, the ICA handled between 40 and 73 arbitration cases per year.

Confidence in the cotton trading system has been significantly undermined by defaults, and tighter trade finance has exerted a strong negative influence on the cotton trade. Many large banks, traditional lenders for commodity trading, have cut financing facilities significantly in an effort to reduce risk exposure, causing tougher capital requirements. This affects the ability of many smaller firms to receive credit. Many of the largest trading houses have their own credit resources, but such is often not the case with smaller traders. In current market conditions, it is estimated that merchants need to provide 25-35 percent in equity to borrow money for trading. This is almost double the requirement that prevailed five years ago. Tighter credit makes it more expensive to warehouse commodities and to hedge, and is a factor leading to market concentration.

The Secretariat has studied the structure of world trade in cotton since 1994 and compiles a list of cotton-trading companies active as of the end of each year. Most of the firms are members of the 18 associations comprising the Committee for International Cooperation between Cotton Associations (CICCA). The latest list was compiled from annual surveys mailed to all members of CICCA, industry publications and personal knowledge. The list of cotton trading companies consists of 443 firms engaged, at least in part, in the international trade of cotton in 2013.

The total number of companies that replied to the surveys is 110. Companies are divided into four categories by annual sales volume: largest (more than 200,000 tons); large (50,000-200,000 tons); medium (20,000-50,000 tons); and specialized (less than 20,000 tons). Organizations are also grouped by type of ownership: government, cooperative or private. The latest list of cotton trading organizations consists of 26 government organizations, 11 cooperatives and 406 private firms.

## Largest

The most recent estimates of the volume traded by the largest companies in 2013 indicate that there are currently 10 organizations with annual volumes of more than 200,000 tons. The group of largest companies includes 4 government organizations, including 3 from Uzbekistan under the same roof of the Ministry of Foreign Economic Relations Investment and Trade (MFERIT), and which are counted as one organization for the purposes of this study.

This group of largest companies traded an estimated 6.2 million tons, or 23% of world production in 2013. Eight privately-owned cotton trading organizations in the largest category handled 5.2 million tons in 2013, or 20% of world production. There was almost no change in the volume and the share of world production handled by this group of companies compared with 2012. In 2013, four of the world's largest cotton trading companies are based in the United States, three in Uzbekistan, and one each in Japan, China, Singapore, Switzerland, and the United Kingdom.

The first study, conducted in 1994, indicated that the 19 largest cotton organizations handled 6.8 million tons, or 36% of world production. 14 of the largest organizations were private or cooperative cotton companies, accounting for an estimated 5.5 million tons, or 29% of world cotton production. The conclusions of the study were that the world cotton trade was not highly concentrated by the standards of industrial markets and was highly competitive. Since 1994, the composition of the group of the largest cotton trading organizations has changed. As a sign of market concentration, a smaller number of the largest firms handle a higher combined volume than in 1994.

Louis Dreyfus Commodities is among the largest multi-commodity traders and has close to \$60 billion in annual sales. Louis Dreyfus, the world's largest cotton merchant, acquired most of the Dunavant Enterprises' subsidiaries in 2010, which was one of the largest family-owned cotton merchants.

Cargill Cotton is another of the largest cotton merchants and is a subsidiary of Cargill Inc., a leading producer and trader of food, agricultural, financial and industrial products and services. Cargill is active in grains, oilseeds, sugar, meats, poultry, fuels and other commodities. Cargill's revenues are estimated at \$136.7 billion during fiscal 2013. Cargill Cotton

operates in all major cotton markets in merchandising, ginning and warehousing.

Olam International is a Singapore-based company and one of the world's largest commodity and cotton traders. Olam International was founded in Singapore in 1989 as a large spinner/merchant. Olam is engaged in ginning, warehousing and trading cotton from Central Asia, West and East Africa, the Americas and China. Olam acquired Queensland Cotton Corporation of Australia in 2007. Olam completed several acquisitions and investments in many commodities including rice, sugar, grains, coffee, cocoa, cashew, peanuts, beans, dairy, wool and others. Olam's annual revenues are estimated at \$20 billion.

Ecom, Noble, Glencore and Multigrain are other examples of large multi-commodity trading houses that are becoming more prominent in the cotton trade. It is evident that consolidation in the agricultural commodities sector is accelerating as the largest traders expand across commodities to take advantage of booming demand generated by population and income growth, especially in fast-growing emerging economies. However, analysis of the structure of cotton trade indicates that, based on the number of companies operating and volumes of cotton traded, the sector remains highly competitive.

## Large

The past five years have seen a significant reduction in the number of large merchants. The number of large cotton traders is estimated to have declined from 44 in 2008 to 38 in 2013. The volume handled by the current group of large companies declined sharply from 4.4 million tons in 2008 to an estimated 3 million tons in 2013, accounting for 12% of world production (17% in 2008). Compared with 2008, the volume traded by large companies in 2012 declined by 1.2 million tons.

The composition of organizations defined as large companies has changed the most since 1994. The number of large government organizations declined from 15 to 2 as a result of privatization, mostly in Africa. The 1994 study indicated that there were 51 large cotton-trading companies handling 4.1 million tons, including 35 privately-owned large organizations accounting for 2.5 million tons, or 13% of world production.

As of 2013, 36 private large companies account for 2.8 million tons, or 11% of world production. The 44 largest and large privately-owned cotton trading companies account for 31% of world shipments in 2013, compared with 42% handled by 49 firms in the same categories in 1994.

Eight of the 38 large cotton traders are based in the United States. Seven large firms are based in India, three each in France and Brazil, two each in Switzerland, Japan and Singapore.

With increased production, mill use and exports in India, a number of Indian merchants have become more active internationally, entering other markets, such as China, opening offices in other countries and trading a variety of growths directly to mills.

## Medium

There are currently 38 firms in the medium category, four less than in 2008, with an estimated combined volume of 1 million tons. The volume traded by medium-sized companies has declined slightly during the last few years. The number of medium-sized companies fell as a result of shifts between the groups of larger and largest companies. In 1994, there were 50 medium companies with approximately 1.5 million tons of combined volume. Among the 38 medium-sized companies, 4 each are based in the United States and in Turkey and 3 in Switzerland.

## Specialized

The most recent survey includes 355 firms in the category of specialized companies, which accounted for 1.7 million tons of combined volume in 2013. The composition of this group has changed significantly. A number of European companies went out of business during the past decade, while some companies were added to this group from larger categories as a result of smaller volumes traded. A very large number of specialized cotton trading companies are based in the United States, Turkey, India, Switzerland, Germany, Egypt, Brazil and Italy.

## Banks and Ocean Freight Organizations

A list of banks and ocean freight organizations involved in providing services to the cotton trade was first compiled in 2003. The list was expanded during the following years and now includes 45 banks from 12 countries and 40 shipping and freight forwarding organizations from 17 countries.

Banks provide important services to the cotton trade, including finance, cash management, letter of credit issuance and collection and processing of documents, lending, bill collection, freight financing, foreign exchange, price risk management instruments, bonds and guaranties, inventory financing, tolling and barter trade financing, clearing, custodian and other services. Banks provide local, urban transaction banking infrastructure for large and small producers as well as services to international merchants financing international transactions. There are banks specializing in certain markets and there are international banking institutions providing a wide range of banking services globally.

## Insurance Companies

During the past several years a list of insurance companies providing services to the cotton industry has been compiled. The list contains 16 insurance companies from 8 countries, many with a global presence and affiliated with banking services.

A large number of brokers provide insurance services to the cotton industry on standard terms, such as the American Institute Cargo Clauses or the Lloyds of London clauses, but are also able to offer special coverage above and beyond standard clauses in unique situations. Among insurance

companies specializing in providing full service in marine cargo insurance to cotton shippers are: Rekerdres & Sons Insurance Agency, Cotton Fire and Mar. Underwriters, based in the United States; Lampe + Schwartz KG, C. Wm Konig GmbH, H. Kraft & Co., and NHA Hamburger Assekuranz-Agentur GmbH, based in Germany; and Windsor Insurance Brokers Ltd., based in the United Kingdom. There are also large financial/insurance providers with hundreds of offices in

tens of countries with a wide range of products and services, including insurance products in demand by the cotton industry, such as AXA, Zurich and AIG.

A full list of cotton trading companies, banking, ocean freight and insurance organizations with contact information can be found in: "Structure of World Cotton Trade" by ordering at: <https://www.icac.org/login?url=%2Fpubdetail.php%3Fid%3DP0000086> at [www.icac.org](http://www.icac.org).



## COTTON TRADING ORGANIZATIONS

(FIRMS ARRANGED BY SIZE, ESTIMATES MADE BY THE SECRETARIAT \*)

| Company Name | Country | Type |
|--------------|---------|------|
|--------------|---------|------|

### Largest Organizations (annual volume: more than 200,000 tons)

|                                                                   |                  |             |
|-------------------------------------------------------------------|------------------|-------------|
| Louis Dreyfus Commodities, Cordova                                | USA              | Private     |
| Cargill Cotton, Cordova                                           | USA              | Private     |
| Olam International Ltd, Singapore 1/                              | SINGAPORE        | Private     |
| Staple Cotton Cooperative Association, Greenwood                  | USA              | Cooperative |
| Ecom USA Inc, Dallas 2/                                           | USA              | Private     |
| Chinatex, Beijing, China                                          | CHINA (MAINLAND) | Government  |
| Paul Reinhart AG, Winterthur 3/                                   | SWITZERLAND      | Private     |
| Toyo Cotton (Japan) Co, Osaka 4/                                  | JAPAN            | Private     |
| Joint-Stock Company Uzinterimpex, Tashkent                        | UZBEKISTAN       | Government  |
| State Joint Stock Foreign Trade Company "Uzmarkazimpex," Tashkent | UZBEKISTAN       | Government  |
| Uzprommashimpeks, Tashkent                                        | UZBEKISTAN       | Government  |
| Plexus Cotton Ltd, Liverpool 5/                                   | UK               | Private     |

### Large Organizations (annual volume: 50,000 tons to 200,000 tons)

|                                                                 |             |             |
|-----------------------------------------------------------------|-------------|-------------|
| Namoi Cotton Cooperative Ltd, Wee Waa, NSW                      | AUSTRALIA   | Cooperative |
| Calcot Ltd, Bakersfield                                         | USA         | Cooperative |
| The Cotton Corporation of India Ltd, Mumbai                     | INDIA       | Government  |
| Khimji Visram & Sons                                            | INDIA       | Private     |
| C.A. Galiakotwala & Co Ltd, Mumbai                              | INDIA       | Private     |
| Gill & Co Ltd, Mumbai                                           | INDIA       | Private     |
| Kotak & Co Pvt Ltd, Mumbai                                      | INDIA       | Private     |
| Toyoshima & Co Ltd, Nagoya 6/                                   | JAPAN       | Private     |
| Carolinas Cotton Growers Cooperative, Inc                       | USA         | Cooperative |
| Otto Stadtlander GmbH, Bremen                                   | GERMANY     | Private     |
| Jess Smith & Sons Cotton, Llc, Bakersfield                      | USA         | Private     |
| Multigrain SA, Sao Paulo                                        | BRAZIL      | Private     |
| EISA – Empresa Ineragrica S.A, São Paulo 2/                     | BRAZIL      | Private     |
| Agro Industrias Unidas De Mexico SA De Cv Amsa, Mexico City 2/  | MEXICO      | Private     |
| Devcot SA, Lille                                                | FRANCE      | Private     |
| International Cotton and Textile Trading Co Ltd, Lugano         | SWITZERLAND | Private     |
| Allbright Cotton, Fresno                                        | USA         | Private     |
| Noble Resources Group, Singapore                                | SINGAPORE   | Private     |
| Texas Cotton Marketing Corp., Austin                            | USA         | Private     |
| Cottip SA, Geneva                                               | SWITZERLAND | Private     |
| Komal Amin Export Pvt. Ltd.                                     | INDIA       | Private     |
| Mambo Commodities, Paris                                        | FRANCE      | Private     |
| Violar SA, Larisa                                               | GREECE      | Private     |
| SA Goenka, Barcelona                                            | SPAIN       | Private     |
| ACG Cotton Marketing, Lubbock                                   | USA         | Private     |
| Agrocorp International PTE Ltd                                  | SINGAPORE   | Private     |
| Arco Cotton Agents (I.C.T. International Cotton Trading), Milan | ITALY       | Private     |
| Baumann Hinde & Co Ltd, Southport                               | UK          | Private     |
| Bhadresh Trading Corporation Ltd                                | INDIA       | Private     |
| CGG Trading SA Sao Paulo                                        | BRAZIL      | Private     |
| Chang Zhou World Cotton Co Ltd                                  | CHINA       | Private     |
| Compagnie Cotonnière Copaco, Paris 7/                           | FRANCE      | Private     |
| Gap Pazarlama A.S., Istanbul                                    | TURKEY      | Private     |
| Loeb & Company, Inc, Montgomery                                 | USA         | Private     |
| Montgomery Co, Inc, Opelika                                     | USA         | Private     |
| Omnicotton Inc., Plano                                          | USA         | Private     |
| Yamachu Mengyo Co Ltd Osaka, Osaka                              | JAPAN       | Private     |
| Dubai Cotton Centre, Dubai                                      | UAE         | Government  |

(continued)

**Medium-Sized Organizations (annual volume: 20,000 to 50,000 tons)**

|                                                               |               |             |
|---------------------------------------------------------------|---------------|-------------|
| Auscott Ltd, Sydney NSW 8/                                    | AUSTRALIA     | Private     |
| Glencore International Ag, Baar                               | SWITZERLAND   | Private     |
| J.G. Boswell Company, Pasadena 8/                             | USA           | Private     |
| Etem Ozsoy Tarim Ticaret Ve Sanayi As, Izmir                  | TURKEY        | Private     |
| Jaume Artigas, Barcelona                                      | SPAIN         | Private     |
| Central Cotton Company Limited, Liverpool 5/                  | UK            | Private     |
| Eastern Trading Co, Inc, Greenville                           | USA           | Private     |
| M. Schiefer Trading Co, Lubbock                               | USA           | Private     |
| Sekhsaria Exports, Mumbai                                     | INDIA         | Private     |
| Plains Cotton Cooperative Association, Lubbock                | USA           | Cooperative |
| Cukurova Cotton Cooperatives Association Cukobirlik, Adana    | TURKEY        | Cooperative |
| Société Cotonnière du Tchad Cotontchad, Paris                 | CHAD          | Government  |
| Société d'Importation et de Commission, Le Havre              | FRANCE        | Private     |
| Taris Pamuk Tarim Satis Koop.Birligi, Izmir                   | TURKEY        | Private     |
| The Cotton Company of Zimbabwe Ltd, Harare                    | ZIMBABWE      | Private     |
| Daewoo Corporation, Seoul                                     | R. of KOREA   | Private     |
| Lyons Cotton, Inc, Memphis                                    | USA           | Private     |
| Pamteks A.S., Adana                                           | TURKEY        | Private     |
| Santista Textil SA, Sao Paulo                                 | BRAZIL        | Private     |
| Bangladesh Textile Mills Corporation, Dhaka                   | BANGLADESH    | Government  |
| Battistel Amiotti Srl, Milan                                  | ITALY         | Private     |
| Compagnie Cotonnière du Benin, Cotonou 7/                     | BENIN         | Government  |
| Compagnie Ivoirienne pour le Developpement des Textiles CIDT  | COTE D'IVOIRE | Government  |
| Cotton Distributors Inc, Lausanne                             | SWITZERLAND   | Private     |
| Egycot for International Trading                              | Egypt         | Private     |
| FCA Comexim Ltd, Moscow                                       | RUSSIA        | Private     |
| Industrie Cotonnière Beninoise, Cotonou                       | BENIN         | Government  |
| Indutech Spa, Milano                                          | ITALY         | Private     |
| Label Coton, Cotonou                                          | BENIN         | Private     |
| Modern Nile Cotton Co, Alexandria                             | EGYPT         | Private     |
| Newcot Ltd, Chene-Bougeries                                   | SWITZERLAND   | Private     |
| Rhein-Schelde Handelgesellschaft Fp Mostert Kg, Neuss         | GERMANY       | Private     |
| Ritis International, Cotonou                                  | BENIN         | Private     |
| Société Beninoise de Representation Sobere, Cotonou           | BENIN         | Government  |
| Société Nationale pour la Promotion Agricole Sonapra, Cotonou | BENIN         | Private     |
| Taevertex, Ghent                                              | BELGIUM       | Private     |
| TCT United SA                                                 | URUGUAY       | Private     |
| The Sudan Cotton Company Ltd, Khartoum                        | SUDAN         | Government  |

\* A full list, including specialized firms and contact information, is available from the Secretariat of the ICAC.

1/ Anderson Clayton Corp., Fresno and Queensland, Australia are affiliated with Olam, Singapore.

2/ Ecom USA Inc, Dallas is affiliated with Ecom Agroindustrial Corp Ltd., Switzerland, Ecom Commodities Pty Ltd., Australia, EISA, Brazil and Agroindustrias Unidas de Mexico.

3/ Paul Reinhart AG, Winterthur is affiliated Cottagon Italia Srl.

4/ Toyo Cotton (Japan) Co, Osaka is affiliated with Toyo Cotton Co., Dallas.

5/ Plexus Cotton Ltd, is affiliated with Central Cotton Company Limited, Liverpool.

6/ Toyoshima & Co Ltd, Nagoya is affiliated with Toyoshima USA, Inc, Cordova.

7/ Compagnie Cotonnière Copaco, Paris is affiliated with Compagnie Cotonnière du Benin, Cotonou.

8/ J.G. Boswell Company, Pasadena is affiliated with Auscot, Australia.

## COTTON BANKING ORGANIZATIONS \*

| Company Name                                               | Country              | Type    |
|------------------------------------------------------------|----------------------|---------|
| ANZ Banking Group Limited, Sydney                          | Australia            | Private |
| Commonwealth Bank Of Australia, Sydney                     | Australia            | Private |
| Macquarie Bank Limited, Sydney                             | Australia            | Private |
| National Australia Bank Group                              | Australia            | Private |
| B.N.P. Paribas, Paris                                      | France               | Private |
| Banque Nationale De Paris, Le Havre                        | France               | Private |
| Bred, Paris                                                | France               | Private |
| Calyon Group, Paris                                        | France               | Private |
| Crédit Agricole SA, Paris                                  | France               | Private |
| Crédit Lyonnais, Le Havre                                  | France               | Private |
| Natexis Banque, Le Havre                                   | France               | Private |
| Societe Generale, Le Havre                                 | France               | Private |
| Bankhaus Carl F. Plump & Co., Bremen                       | Germany              | Private |
| Bankhaus Neelmeyer Aktiengesellschaft, Bremen              | Germany              | Private |
| Bremer Bank, Landesbank, Kreditanstalt, Oldenburg, Bremen  | Germany              | Private |
| Bremer Bank, Niederlassung Der Dresdner Bank AG, Bremen    | Germany              | Private |
| Bremische Volksbank AG, Bremen                             | Germany              | Private |
| Commerzbank Aktiengesellschaft, Bremen                     | Germany              | Private |
| Deutsche Bank AG Filiale Bremen, Bremen                    | Germany              | Private |
| DG Bank Deutsche Genossenschaftsbank AG, Frankfurt Am Main | Germany              | Private |
| Die Sparkasse Bremen AG, Bremen                            | Germany              | Private |
| Dresdner Bank AG, Frankfurt                                | Germany              | Private |
| ABN AMRO Bank, Mumbai                                      | India                | Private |
| UniCredit S.p.A., Milano                                   | Italy                | Private |
| Tokai Bank, Ltd., Osaka                                    | Japan                | Private |
| Banco Comercial e de Investimentos, SARL, Maputo           | Mozambique           | Private |
| ING Groep N.V., Amsterdam                                  | Netherlands          | Private |
| Rabobank International, Utrecht                            | Netherlands          | Private |
| Fortis, Brussels                                           | Netherlands, Belgium | Private |
| Novikombank, Moscow                                        | Russia               | Private |
| Rosbank, Moscow                                            | Russia               | Private |
| Crédit Lyonnais, (SUISSE) S.A., Geneva                     | Switzerland          | Private |
| Crédit Suisse, Zurich                                      | Switzerland          | Private |
| Barclays Bank PLC, Liverpool                               | UK                   | Private |
| HSBC Bank PLC, Traders Services, Manchester                | UK                   | Private |
| Royal Bank of Scotland Group, Manchester                   | UK                   | Private |
| Standard Chartered, London                                 | UK                   | Private |
| KeyBank NA, Bellevue, WA                                   | USA                  | Private |
| National Bank of Commerce, Memphis                         | USA                  | Private |
| PNB Financial, Lubbock                                     | USA                  | Private |
| Regions Bank, Montgomery                                   | USA                  | Private |
| SunTrust Banks, Inc., Memphis                              | USA                  | Private |
| U.S. Bank International Banking Group                      | USA                  | Private |
| Union Planters National Bank, Memphis                      | USA                  | Private |
| Wells Fargo Bank, Fresno                                   | USA                  | Private |

\* A full list, contact information, is available on the web at [www.icac.org](http://www.icac.org)  
Banks that finance cotton trade.



## OCEAN FREIGHT ORGANIZATIONS

| Company Name                                                   | Country*    | Type    |
|----------------------------------------------------------------|-------------|---------|
| Transportes Fast SA., Maipu                                    | Argentina   | Private |
| ANL Container Line Pty Ltd., Sydney                            | Australia   | Private |
| Logisticsnew Ltd., Sao Paulo                                   | Brazil      | Private |
| Maersk, Copenhagen                                             | Denmark     | Private |
| CMA- CGM The French Line, Marseille                            | France      | Private |
| Delmas, Le Havre                                               | France      | Private |
| GETMA International, Paris                                     | France      | Private |
| Transports Terrestres Maritimes Et Fluviaux (T.M.F.), Docelles | France      | Private |
| WAL West-Africa Linen-Dienste GmbH & Co., Hamburg              | Germany     | Private |
| George A. Callitis Succsrs S.A., Thessaloniki                  | Greece      | Private |
| Interforex Shipping Agency Ltd., Piraeus                       | Greece      | Private |
| Sarlis Container Services SA, Piraeus                          | Greece      | Private |
| Sea Levant (Hellas) Ltd., Thessaloniki                         | Greece      | Private |
| Expo Freight Pvt Ltd., Nungambakkam, Chennai                   | India       | Private |
| Veneta Lombarda Spedizioni, Venice                             | Italy       | Private |
| American President Lines, Osaka                                | Japan       | Private |
| Kamix Corporation, Kobe                                        | Japan       | Private |
| Kawasaki Kisen Kaisha, Ltd., Osaka                             | Japan       | Private |
| Meiko Trans Co., Ltd., Nagoya                                  | Japan       | Private |
| Mitsubishi Logistics Corporation, Kobe                         | Japan       | Private |
| Mitsui O.S.K. Lines, Ltd., Osaka                               | Japan       | Private |
| Nippon Yusen Kaisha, Osaka                                     | Japan       | Private |
| Shiota Kingyo Co., Ltd., Yokohama                              | Japan       | Private |
| Toyo Logistics Co., Ltd, Nagoya                                | Japan       | Private |
| Signals-P Ltd., Riga                                           | Latvia      | Private |
| A.J. Goncalves De Moraes, Lda., Leca da Palmeira               | Portugal    | Private |
| Cargomaris Shipping & Trading Ltd.                             | Portugal    | Private |
| Cargonautic AG, Zurich                                         | Switzerland | Private |
| DHL Danzas Air & Ocean Tas. Tic Ltd., Izmir                    | Turkey      | Private |
| Maya International Trading Co Ltd., Mersin                     | Turkey      | Private |
| RJJ Worldwide Ltd., Berkshire                                  | UK          | Private |
| Ilyichevskvneshttrans, Ilyichevsk                              | Ukraine     | Private |
| Allways Transportation Inc., Memphis, TN                       | USA         | Private |
| Coppersmith Inc., El Segundo, CA                               | USA         | Private |
| Logisource Inc., Matthews, NC                                  | USA         | Private |
| Mallory Alexander Int. Logistics, Memphis, TN                  | USA         | Private |
| Mediterranean Shipping Co., Dallas, TX                         | USA         | Private |
| The Kearney companies Inc., New Orleans, LA                    | USA         | Private |
| TMM Lines, Houston, TX                                         | USA         | Private |
| Transales, Inc., Sumter SC                                     | USA         | Private |

\* Location of Headquarters.

## COTTON INSURANCE ORGANIZATIONS

| Company Name                                   | Country*  | Type       |
|------------------------------------------------|-----------|------------|
| Centralia Argentina S.A., Buenos Aires         | Argentina | Private    |
| Agririsk Services PTY Limited, Sydney          | Australia | Private    |
| Activa Assurances, Douala                      | Cameroon  | Private    |
| AXA Group, Paris                               | France    | Private    |
| C. Wm. Konig GmbH & Co. KG, Bremen             | Germany   | Private    |
| H. Kraft & Co., Bremen                         | Germany   | Private    |
| Lampe + Schwartz KG, Bremen                    | Germany   | Private    |
| NHA Hamburger Assekuranz-Agentur GmbH, Hamburg | Germany   | Private    |
| Agri Insurance Company                         | India     | Government |
| National Agricultural Insurance Company        | India     | Government |
| Windsor Insurance Brokers Ltd., London         | UK        | Private    |
| Agri Insurance Southeast, Inc., Tifton, GA     | USA       | Private    |
| AIG Global Marine, New York, NY                | USA       | Private    |
| Cotton Fire & Mar. Underwriters                | USA       | Private    |
| Rekerdres & Sons, Dallas, TX                   | USA       | Private    |
| Zurich NA, Schaumburg, IL                      | USA       | Private    |

\* Location of Headquarters.



## 2012/13 SUPPLY AND USE OF COTTON BY COUNTRY

February 3, 2014

|                   | AREA         | YIELD        | PROD            | BEG STKS     | IMPORTS    | CONS         | EXPORTS      | END STKS     | S/U *       | S/MU **      |
|-------------------|--------------|--------------|-----------------|--------------|------------|--------------|--------------|--------------|-------------|--------------|
|                   | 000 Ha       | Kgs/Ha       | 000 Metric Tons |              |            |              |              |              | Ratio       | Ratio        |
| CANADA            |              |              |                 | 0            | 1          | 1            |              | 0            | 0.03        | 0.03         |
| CUBA              | 4            | 269          | 1               | 1            | 2          | 3            |              | 1            | 0.19        | 0.19         |
| DOM. REP.         |              |              |                 |              | 1          | 1            |              | 0            | 0.47        | 0.47         |
| MEXICO            | 153          | 1,511        | 231             | 137          | 245        | 236          | 49           | 327          | 1.15        | 1.38         |
| USA               | 3,793        | 994          | 3,770           | 729          | 2          | 751          | 2,902        | 848          | 0.23        | 1.13         |
| <b>N. America</b> | <b>3,955</b> | <b>1,012</b> | <b>4,003</b>    | <b>868</b>   | <b>251</b> | <b>994</b>   | <b>2,951</b> | <b>1,177</b> | <b>0.30</b> | <b>1.18</b>  |
| EL SALVADOR       |              |              |                 | 5            | 28         | 22           |              | 11           | 0.52        | 0.52         |
| GUATEMALA         |              |              |                 | 4            | 23         | 21           |              | 7            | 0.33        | 0.33         |
| HONDURAS          | 0            | 316          | 0               | 0            |            |              |              | 0            |             |              |
| <b>C. America</b> | <b>2</b>     | <b>510</b>   | <b>1</b>        | <b>9</b>     | <b>52</b>  | <b>43</b>    | <b>0</b>     | <b>18</b>    | <b>0.42</b> | <b>0.42</b>  |
| ARGENTINA         | 362          | 434          | 157             | 190          | 6          | 140          | 55           | 158          | 0.81        | 1.13         |
| BOLIVIA           | 5            | 536          | 3               | 1            | 1          | 3            |              | 1            | 0.21        | 0.21         |
| BRAZIL            | 870          | 1,450        | 1,261           | 1,352        | 14         | 887          | 938          | 803          | 0.44        | 0.90         |
| CHILE             |              |              |                 | 0            | 0          | 0            |              | 0            | 0.20        | 0.20         |
| COLOMBIA          | 28           | 746          | 21              | 28           | 32         | 74           | 0            | 6            | 0.08        | 0.08         |
| ECUADOR           | 1            | 440          | 1               | 3            | 11         | 12           |              | 2            | 0.14        | 0.14         |
| PARAGUAY          | 70           | 370          | 26              | 10           | 1          | 8            | 19           | 10           | 0.37        | 1.24         |
| PERU              | 45           | 878          | 40              | 29           | 59         | 92           | 1            | 34           | 0.37        | 0.37         |
| URUGUAY           |              |              |                 | 0            | 0          | 0            |              | 0            | 0.49        | 0.49         |
| VENEZUELA         | 15           | 368          | 6               | 1            | 2          | 8            |              | 1            | 0.17        | 0.17         |
| <b>S. America</b> | <b>1,396</b> | <b>1,084</b> | <b>1,513</b>    | <b>1,613</b> | <b>126</b> | <b>1,225</b> | <b>1,012</b> | <b>1,015</b> | <b>0.45</b> | <b>0.83</b>  |
| ALGERIA           |              |              |                 | 1            | 3          | 3            |              | 1            | 0.19        | 0.19         |
| EGYPT             | 122          | 895          | 109             | 83           | 34         | 120          | 51           | 56           | 0.33        | 0.46         |
| MOROCCO           |              |              |                 | 8            | 32         | 36           |              | 4            | 0.10        | 0.10         |
| SUDAN             | 49           | 301          | 15              | 25           |            | 4            | 19           | 17           | 0.78        | 4.52         |
| TUNISIA           |              |              |                 | 3            | 13         | 13           |              | 3            | 0.21        | 0.21         |
| <b>N. Africa</b>  | <b>171</b>   | <b>726</b>   | <b>124</b>      | <b>120</b>   | <b>82</b>  | <b>176</b>   | <b>70</b>    | <b>80</b>    | <b>0.33</b> | <b>0.46</b>  |
| BENIN             | 351          | 450          | 118             | 27           |            | 4            | 93           | 48           | 0.49        | 12.00        |
| BURKINA FASO      | 586          | 444          | 260             | 67           |            | 4            | 215          | 108          | 0.50        | 27.09        |
| CAMEROON          | 194          | 567          | 110             | 24           |            | 2            | 82           | 51           | 0.61        | 26.63        |
| CENT. AFR. REP.   | 38           | 237          | 9               | 4            |            |              | 9            | 4            | 0.40        |              |
| CHAD              | 270          | 127          | 34              | 14           |            | 1            | 34           | 13           | 0.38        | 26.61        |
| COTE D'IVOIRE     | 340          | 447          | 152             | 30           | 0          | 2            | 136          | 44           | 0.32        | 22.04        |
| GUINEA            | 14           | 289          | 4               | 2            |            |              | 4            | 2            | 0.40        |              |
| MADAGASCAR        |              |              |                 | 3            |            |              |              | 3            |             |              |
| MALI              | 548          | 345          | 189             | 70           |            | 3            | 171          | 85           | 0.49        | 28.35        |
| NIGER             | 5            | 448          | 2               | 0            |            | 1            | 1            | 0            | 0.11        | 0.25         |
| SENEGAL           | 33           | 420          | 14              | 3            |            | 1            | 14           | 2            | 0.12        | 2.24         |
| TOGO              | 122          | 344          | 42              | 3            |            |              | 40           | 5            | 0.13        |              |
| <b>F. Africa</b>  | <b>2,500</b> | <b>374</b>   | <b>935</b>      | <b>247</b>   | <b>0</b>   | <b>17</b>    | <b>799</b>   | <b>365</b>   | <b>0.45</b> | <b>21.30</b> |
| ANGOLA            | 3            | 302          | 1               | 0            |            | 1            | 0            | 0            | 0.23        | 0.34         |
| ETHIOPIA          | 98           | 251          | 30              | 22           | 1          | 45           | 3            | 4            | 0.09        | 0.10         |
| GHANA             | 18           | 364          | 7               | 3            | 0          | 1            | 6            | 2            | 0.23        | 1.31         |
| KENYA             | 39           | 170          | 7               | 1            | 0          | 7            |              | 1            | 0.16        | 0.16         |
| MALAWI            | 180          | 192          | 35              | 24           |            | 3            | 34           | 22           | 0.59        | 7.20         |
| MOZAMBIQUE        | 150          | 250          | 37              | 42           |            |              | 53           | 27           | 0.50        |              |
| NIGERIA           | 315          | 197          | 62              | 29           | 1          | 19           | 40           | 33           | 0.56        | 1.72         |
| SOUTH AFRICA      | 10           | 586          | 6               | 16           | 49         | 19           | 5            | 47           | 2.01        | 2.50         |
| TANZANIA          | 420          | 213          | 90              | 132          |            | 32           | 66           | 124          | 1.26        | 3.86         |
| UGANDA            | 74           | 253          | 19              | 21           |            | 1            | 28           | 11           | 0.40        | 9.97         |
| CONGO, DR         |              |              |                 | 2            | 8          | 8            |              | 2            | 0.27        | 0.27         |
| ZAMBIA            | 168          | 226          | 38              | 103          |            |              | 83           | 57           | 0.69        |              |
| ZIMBABWE          | 397          | 145          | 58              | 72           |            | 5            | 84           | 40           | 0.45        | 8.02         |
| <b>S. Africa</b>  | <b>1,895</b> | <b>207</b>   | <b>393</b>      | <b>471</b>   | <b>81</b>  | <b>166</b>   | <b>404</b>   | <b>376</b>   | <b>0.66</b> | <b>2.26</b>  |
| KAZAKHSTAN        | 133          | 677          | 90              | 13           | 0          | 15           | 45           | 43           | 0.72        | 2.92         |
| KYRGYZSTAN        | 31           | 874          | 27              | 3            | 3          | 1            | 29           | 3            | 0.10        | 2.92         |
| TAJIKISTAN        | 196          | 550          | 130             | 39           |            | 7            | 136          | 26           | 0.18        | 3.90         |
| TURKMENISTAN      | 525          | 638          | 335             | 203          |            | 138          | 171          | 230          | 0.75        | 1.67         |
| UZBEKISTAN        | 1,285        | 778          | 1,000           | 335          | 1          | 325          | 653          | 358          | 0.37        | 1.10         |
| <b>C. Asia</b>    | <b>2,170</b> | <b>729</b>   | <b>1,582</b>    | <b>594</b>   | <b>4</b>   | <b>485</b>   | <b>1,034</b> | <b>661</b>   | <b>0.44</b> | <b>1.36</b>  |



## 2012/13 SUPPLY &amp; USE OF COTTON BY COUNTRY (cont'd) February 3, 2014

|                        | AREA          | YIELD        | PROD          | BEG STKS      | IMPORTS         | CONS          | EXPORTS       | END STKS      | S/U *       | S/MU **     |
|------------------------|---------------|--------------|---------------|---------------|-----------------|---------------|---------------|---------------|-------------|-------------|
|                        | 000 Ha        | Kgs/Ha       |               |               | 000 Metric Tons |               |               |               | Ratio       | Ratio       |
| AUSTRIA                |               |              |               | 1             | 6               | 4             |               | 3             | 0.88        | 0.88        |
| AZERBAIJAN             | 33            | 450          | 19            | 11            |                 | 10            | 5             | 15            | 0.96        | 1.45        |
| BELARUS                |               |              |               | 4             | 11              | 11            |               | 4             | 0.34        | 0.34        |
| BELGIUM                |               |              |               | 2             | 13              | 4             | 6             | 5             | 0.50        | 1.25        |
| BULGARIA               | 1             | 321          | 0             | 1             | 5               | 2             |               | 4             | 2.01        | 2.01        |
| CZECH REP.             |               |              |               | 1             | 5               | 6             | 0             | 0             | 0.05        | 0.05        |
| DENMARK                |               |              |               |               | 0               |               |               |               |             |             |
| ESTONIA                |               |              |               |               |                 |               |               |               |             |             |
| FINLAND                |               |              |               |               |                 |               |               |               |             |             |
| FRANCE                 |               |              |               | 3             | 17              | 15            | 3             | 3             | 0.15        | 0.18        |
| GERMANY                |               |              |               | 20            | 49              | 38            | 6             | 25            | 0.55        | 0.65        |
| GREECE                 | 279           | 930          | 248           | 57            | 3               | 21            | 237           | 50            | 0.19        | 2.36        |
| HUNGARY                |               |              |               | 0             | 1               | 1             |               | 0             | 0.42        | 0.42        |
| IRELAND                |               |              |               | 0             | 0               | 0             |               | 0             | 2.78        | 2.78        |
| ITALY                  |               |              |               | 10            | 54              | 43            | 5             | 16            | 0.33        | 0.37        |
| LATVIA                 |               |              |               | 0             | 1               | 1             |               | 0             | 0.10        | 0.10        |
| LITHUANIA              |               |              |               | 0             | 0               | 0             |               | 0             | 0.56        | 0.56        |
| MOLDOVA                |               |              |               | 1             | 2               | 2             |               | 1             | 0.34        | 0.34        |
| NETHERLANDS            |               |              |               | 0             | 5               | 5             |               | 0             | 0.09        |             |
| NORWAY                 |               |              |               |               |                 |               |               |               |             |             |
| POLAND                 |               |              |               | 0             | 3               | 2             |               | 1             | 0.28        | 0.28        |
| PORTUGAL               |               |              |               | 4             | 33              | 22            | 1             | 14            | 0.64        | 0.66        |
| ROMANIA                |               |              |               | 0             | 1               | 1             |               | 0             | 0.22        | 0.22        |
| RUSSIA                 | 1             | 519          | 1             | 17            | 43              | 50            |               | 11            | 0.23        | 0.23        |
| SLOVAK REP.            |               |              |               |               |                 |               |               |               |             |             |
| SPAIN                  | 67            | 845          | 57            | 9             | 3               | 6             | 57            | 7             | 0.11        | 1.18        |
| SWEDEN                 |               |              |               | 0             | 0               | 0             |               | 0             | 0.10        | 0.10        |
| SWITZERLAND            |               |              |               | 1             | 4               | 4             | 0             | 0             | 0.08        | 0.09        |
| UKRAINE                |               |              |               | 1             | 2               | 2             |               | 0             | 0.09        | 0.09        |
| UNITED KINGDOM         |               |              |               | 0             | 1               | 0             |               | 0             | 1.23        | 1.23        |
| FORMER YUGOSLAVIA      |               |              |               | 1             | 6               | 6             |               | 1             | 0.20        | 0.20        |
| <b>Europe</b>          | <b>382</b>    | <b>850</b>   | <b>324</b>    | <b>147</b>    | <b>271</b>      | <b>259</b>    | <b>320</b>    | <b>163</b>    | <b>0.09</b> | <b>0.63</b> |
| <b>Including EU-27</b> | <b>347</b>    | <b>878</b>   | <b>305</b>    | <b>110</b>    | <b>201</b>      | <b>171</b>    | <b>315</b>    | <b>130</b>    | <b>0.27</b> | <b>0.76</b> |
| CHINA                  | 4,975         | 1,467        | 7,300         | 6,181         | 4,426           | 8,290         | 10            | 9,607         | 1.16        | 1.16        |
| TAIWAN                 |               |              |               | 46            | 205             | 204           |               | 48            | 0.24        | 0.24        |
| HONG KONG              |               |              |               | 22            | 86              | 12            | 38            | 58            | 1.16        | 4.98        |
| <b>Sub total</b>       | <b>4,975</b>  | <b>1,467</b> | <b>7,300</b>  | <b>6,250</b>  | <b>4,717</b>    | <b>8,505</b>  | <b>49</b>     | <b>9,713</b>  | <b>1.14</b> | <b>1.14</b> |
| AUSTRALIA              | 442           | 2,138        | 999           | 639           | 0               | 8             | 1,345         | 285           | 0.21        | 35.80       |
| INDONESIA              | 9             | 714          | 6             | 217           | 683             | 493           | 1             | 412           | 0.83        | 0.84        |
| JAPAN                  |               |              |               | 21            | 69              | 63            |               | 27            | 0.42        | 0.42        |
| KOREA, D.R.            |               |              |               | 1             | 5               | 5             |               | 1             | 0.24        | 0.24        |
| KOREA, REP.            |               |              |               | 51            | 286             | 272           | 1             | 64            | 0.24        | 0.24        |
| MALAYSIA               |               |              |               | 41            | 151             | 15            | 160           | 17            | 0.10        | 1.14        |
| PHILIPPINES            | 0             | 566          | 0             | 2             | 9               | 8             |               | 4             | 0.48        | 0.48        |
| SINGAPORE              |               |              |               | 2             | 12              |               | 14            | 0             | 0.02        |             |
| THAILAND               | 2             | 516          | 1             | 83            | 329             | 360           | 1             | 52            | 0.14        | 0.15        |
| VIETNAM                | 11            | 463          | 5             | 83            | 429             | 412           |               | 104           | 0.25        | 0.25        |
| <b>E. Asia</b>         | <b>484</b>    | <b>2,106</b> | <b>1,019</b>  | <b>1,142</b>  | <b>1,973</b>    | <b>1,643</b>  | <b>1,522</b>  | <b>969</b>    | <b>0.31</b> | <b>0.59</b> |
| AFGHANISTAN            | 50            | 410          | 20            | 20            |                 | 4             | 19            | 18            | 0.79        | 4.32        |
| BANGLADESH             | 40            | 591          | 23            | 193           | 593             | 800           |               | 9             | 0.01        | 0.01        |
| INDIA                  | 11,760        | 518          | 6,095         | 1,858         | 258             | 4,845         | 1,685         | 1,681         | 0.26        | 0.35        |
| MYANMAR                | 349           | 584          | 204           | 104           |                 | 201           |               | 107           | 0.53        | 0.53        |
| PAKISTAN               | 2,960         | 740          | 2,204         | 326           | 430             | 2,416         | 92            | 452           | 0.18        | 0.19        |
| SRI LANKA              |               |              |               | 0             | 2               | 2             |               | 0             | 0.11        | 0.11        |
| <b>S. Asia</b>         | <b>15,162</b> | <b>564</b>   | <b>8,549</b>  | <b>2,503</b>  | <b>1,283</b>    | <b>8,271</b>  | <b>1,795</b>  | <b>2,270</b>  | <b>0.23</b> | <b>0.27</b> |
| IRAN                   | 110           | 509          | 56            | 24            | 49              | 91            |               | 38            | 0.42        | 0.42        |
| IRAQ                   | 20            | 360          | 7             | 1             | 5               | 13            |               | 1             | 0.09        | 0.09        |
| ISRAEL                 | 8             | 1,786        | 15            | 1             |                 |               | 15            | 1             | 0.09        |             |
| SYRIA                  | 137           | 1,100        | 150           | 128           |                 | 88            | 7             | 184           | 1.95        | 2.11        |
| TURKEY                 | 488           | 1,759        | 858           | 489           | 804             | 1,350         | 47            | 754           | 0.54        | 0.56        |
| <b>Sub total</b>       | <b>802</b>    | <b>1,374</b> | <b>1,102</b>  | <b>650</b>    | <b>869</b>      | <b>1,566</b>  | <b>70</b>     | <b>985</b>    | <b>0.99</b> | <b>0.63</b> |
| <b>WORLD TOTAL</b>     | <b>33,872</b> | <b>792</b>   | <b>26,838</b> | <b>14,611</b> | <b>9,708</b>    | <b>23,340</b> | <b>10,027</b> | <b>17,790</b> | <b>0.76</b> | <b>0.76</b> |

\*/ Ending stocks divided by consumption plus exports.

Subtotals and total include countries not shown.

\*\*/ Ending stocks divided by consumption.


**2013/14 SUPPLY AND USE OF COTTON BY COUNTRY February 3, 2014**

|                   | AREA         | YIELD        | PROD         | BEG STKS     | IMPORTS         | CONS         | EXPORTS      | END STKS     | S/U *       | S/MU **      |
|-------------------|--------------|--------------|--------------|--------------|-----------------|--------------|--------------|--------------|-------------|--------------|
|                   | 000 Ha       | Kgs/Ha       |              |              | 000 Metric Tons |              |              |              | Ratio       | Ratio        |
| CANADA            |              |              |              | 0            | 1               | 1            |              | 0            | 0.03        | 0.03         |
| CUBA              | 4            | 272          | 1            | 1            | 2               | 3            |              | 1            | 0.19        | 0.19         |
| DOM. REP.         |              |              |              |              | 1               | 1            |              | 0            | 0.47        | 0.47         |
| MEXICO            | 119          | 1,526        | 181          | 327          | 114             | 238          | 49           | 334          | 1.16        | 1.40         |
| USA               | 3,149        | 912          | 2,871        | 848          | 2               | 784          | 2,286        | 652          | 0.21        | 0.83         |
| <b>N. America</b> | <b>3,277</b> | <b>932</b>   | <b>3,054</b> | <b>1,177</b> | <b>120</b>      | <b>1,029</b> | <b>2,335</b> | <b>987</b>   | <b>0.29</b> | <b>0.96</b>  |
| EL SALVADOR       |              |              |              | 11           | 22              | 22           |              | 11           | 0.52        | 0.52         |
| GUATEMALA         |              |              |              | 7            | 23              | 21           |              | 9            | 0.45        | 0.45         |
| HONDURAS          | 0            | 319          | 0            | 0            |                 |              |              | 0            |             |              |
| <b>C. America</b> | <b>2</b>     | <b>515</b>   | <b>1</b>     | <b>18</b>    | <b>45</b>       | <b>43</b>    | <b>0</b>     | <b>21</b>    | <b>0.49</b> | <b>0.49</b>  |
| ARGENTINA         | 600          | 483          | 290          | 158          | 6               | 142          | 31           | 281          | 1.63        | 1.98         |
| BOLIVIA           | 5            | 532          | 3            | 1            | 2               | 3            | 1            | 1            | 0.16        | 0.20         |
| BRAZIL            | 1,063        | 1,543        | 1,641        | 803          | 48              | 925          | 764          | 803          | 0.48        | 0.87         |
| CHILE             |              |              |              | 0            | 0               | 0            |              | 0            | 0.20        | 0.20         |
| COLOMBIA          | 44           | 792          | 35           | 6            | 43              | 78           | 0            | 6            | 0.08        | 0.08         |
| ECUADOR           | 1            | 436          | 1            | 2            | 11              | 12           |              | 2            | 0.14        | 0.14         |
| PARAGUAY          | 25           | 432          | 11           | 10           | 1               | 8            | 11           | 3            | 0.14        | 0.34         |
| PERU              | 43           | 894          | 38           | 34           | 54              | 92           | 1            | 34           | 0.37        | 0.37         |
| URUGUAY           |              |              |              | 0            | 0               | 0            |              | 0            | 0.49        | 0.49         |
| VENEZUELA         | 15           | 365          | 6            | 1            | 2               | 8            |              | 1            | 0.17        | 0.17         |
| <b>S. America</b> | <b>1,796</b> | <b>1,126</b> | <b>2,023</b> | <b>1,015</b> | <b>168</b>      | <b>1,268</b> | <b>807</b>   | <b>1,131</b> | <b>0.54</b> | <b>0.89</b>  |
| ALGERIA           |              |              |              | 1            | 3               | 3            |              | 1            | 0.19        | 0.19         |
| EGYPT             | 122          | 821          | 100          | 56           | 103             | 128          | 72           | 58           | 0.29        | 0.46         |
| MOROCCO           |              |              |              | 4            | 36              | 36           |              | 4            | 0.10        | 0.10         |
| SUDAN             | 53           | 360          | 19           | 17           |                 | 4            | 15           | 17           | 0.92        | 4.30         |
| TUNISIA           |              |              |              | 3            | 13              | 13           |              | 3            | 0.21        | 0.21         |
| <b>N. Africa</b>  | <b>175</b>   | <b>682</b>   | <b>119</b>   | <b>80</b>    | <b>154</b>      | <b>184</b>   | <b>87</b>    | <b>83</b>    | <b>0.31</b> | <b>0.45</b>  |
| BENIN             | 333          | 285          | 95           | 48           |                 | 4            | 105          | 34           | 0.31        | 8.50         |
| BURKINA FASO      | 557          | 444          | 247          | 108          |                 | 4            | 253          | 99           | 0.39        | 24.70        |
| CAMEROON          | 214          | 514          | 110          | 51           |                 | 2            | 101          | 58           | 0.56        | 30.36        |
| CENT. AFR. REP.   | 36           | 228          | 8            | 4            |                 |              | 8            | 3            | 0.38        |              |
| CHAD              | 257          | 160          | 41           | 13           |                 | 1            | 38           | 16           | 0.41        | 31.80        |
| COTE D'IVOIRE     | 362          | 449          | 163          | 44           |                 | 2            | 130          | 75           | 0.57        | 37.61        |
| GUINEA            | 13           | 270          | 4            | 2            |                 |              | 4            | 1            | 0.38        |              |
| MADAGASCAR        |              |              |              | 3            |                 |              |              | 3            |             |              |
| MALI              | 548          | 375          | 205          | 85           |                 | 3            | 199          | 89           | 0.44        | 29.67        |
| NIGER             | 5            | 444          | 2            | 0            |                 | 1            | 1            | 0            | 0.12        | 0.25         |
| SENEGAL           | 32           | 378          | 12           | 2            |                 | 1            | 9            | 4            | 0.44        | 5.47         |
| TOGO              | 116          | 320          | 37           | 5            |                 |              | 35           | 7            | 0.20        |              |
| <b>F. Africa</b>  | <b>2,473</b> | <b>374</b>   | <b>924</b>   | <b>365</b>   |                 | <b>17</b>    | <b>882</b>   | <b>390</b>   | <b>0.43</b> | <b>22.77</b> |
| ANGOLA            | 3            | 299          | 1            | 0            |                 | 1            | 0            | 0            | 0.24        | 0.34         |
| ETHIOPIA          | 123          | 303          | 37           | 4            | 4               | 42           | 3            | 1            | 0.02        | 0.02         |
| GHANA             | 16           | 363          | 6            | 2            | 1               | 1            | 6            | 2            | 0.25        | 1.31         |
| KENYA             | 35           | 185          | 6            | 1            | 0               | 7            | 0            | 1            | 0.08        | 0.08         |
| MALAWI            | 162          | 268          | 43           | 22           |                 | 3            | 36           | 26           | 0.68        | 8.75         |
| MOZAMBIQUE        | 157          | 287          | 45           | 27           |                 |              | 42           | 29           | 0.69        |              |
| NIGERIA           | 284          | 203          | 57           | 33           | 1               | 19           | 47           | 26           | 0.40        | 1.40         |
| SOUTH AFRICA      | 9            | 957          | 9            | 47           | 19              | 21           | 10           | 44           | 1.43        | 2.12         |
| TANZANIA          | 409          | 195          | 80           | 124          |                 | 32           | 56           | 115          | 1.31        | 3.61         |
| UGANDA            | 52           | 383          | 20           | 11           |                 | 1            | 18           | 12           | 0.64        | 10.68        |
| CONGO, DR         |              |              |              | 2            | 8               | 8            |              | 2            | 0.27        | 0.27         |
| ZAMBIA            | 300          | 450          | 135          | 57           |                 |              | 95           | 98           | 1.04        |              |
| ZIMBABWE          | 333          | 282          | 85           | 40           |                 | 4            | 76           | 44           | 0.55        | 11.86        |
| <b>S. Africa</b>  | <b>1,903</b> | <b>278</b>   | <b>529</b>   | <b>376</b>   | <b>56</b>       | <b>163</b>   | <b>391</b>   | <b>407</b>   | <b>0.73</b> | <b>2.50</b>  |
| KAZAKHSTAN        | 126          | 588          | 74           | 43           | 0               | 15           | 59           | 43           | 0.58        | 2.92         |
| KYRGYZSTAN        | 27           | 831          | 23           | 3            | 3               | 1            | 25           | 3            | 0.11        | 2.92         |
| TAJIKISTAN        | 186          | 537          | 118          | 26           |                 | 7            | 98           | 40           | 0.39        | 5.99         |
| TURKMENISTAN      | 550          | 485          | 329          | 230          |                 | 144          | 195          | 219          | 0.65        | 1.52         |
| UZBEKISTAN        | 1,246        | 738          | 920          | 358          | 1               | 345          | 680          | 255          | 0.25        | 0.74         |
| <b>C. Asia</b>    | <b>2,136</b> | <b>685</b>   | <b>1,464</b> | <b>661</b>   | <b>4</b>        | <b>511</b>   | <b>1,057</b> | <b>560</b>   | <b>0.36</b> | <b>1.10</b>  |


**2013/14 SUPPLY & USE OF COTTON BY COUNTRY (cont'd) February 3, 2014**

|                    | AREA          | YIELD      | PROD          | BEG STKS      | IMPORTS         | CONS          | EXPORTS      | END STKS      | S/U *       | S/MU **     |
|--------------------|---------------|------------|---------------|---------------|-----------------|---------------|--------------|---------------|-------------|-------------|
|                    | 000 Ha        | Kgs/Ha     |               |               | 000 Metric Tons |               |              |               | Ratio       | Ratio       |
| AUSTRIA            |               |            |               | 3             | 3               | 3             |              | 3             | 0.90        | 0.90        |
| AZERBAIJAN         | 25            | 499        | 15            | 15            |                 | 10            | 8            | 11            | 0.62        | 1.11        |
| BELARUS            |               |            |               | 4             | 11              | 11            |              | 4             | 0.34        | 0.34        |
| BELGIUM            |               |            |               | 5             | 10              | 4             | 6            | 5             | 0.51        | 1.29        |
| BULGARIA           | 0             | 324        | 0             | 4             | 2               | 2             |              | 4             | 2.11        | 2.11        |
| CZECH REP.         |               |            |               | 0             | 5               | 5             | 0            | 0             | 0.05        | 0.05        |
| DENMARK            |               |            |               |               |                 |               |              |               |             |             |
| ESTONIA            |               |            |               |               |                 |               |              |               |             |             |
| FINLAND            |               |            |               |               |                 |               |              |               |             |             |
| FRANCE             |               |            |               | 3             | 16              | 14            | 2            | 3             | 0.17        | 0.19        |
| GERMANY            |               |            |               | 25            | 40              | 35            | 5            | 24            | 0.60        | 0.68        |
| GREECE             | 250           | 1,120      | 280           | 50            | 1               | 20            | 261          | 50            | 0.18        | 2.51        |
| HUNGARY            |               |            |               | 0             | 1               | 1             |              | 0             | 0.44        | 0.44        |
| IRELAND            |               |            |               | 0             | 0               | 0             |              | 0             | 3.09        | 3.09        |
| ITALY              |               |            |               | 16            | 50              | 41            | 4            | 21            | 0.46        | 0.51        |
| LATVIA             |               |            |               | 0             | 1               | 1             |              | 0             | 0.10        | 0.10        |
| LITHUANIA          |               |            |               | 0             | 0               | 0             |              | 0             | 0.56        | 0.56        |
| MOLDOVA            |               |            |               | 1             | 2               | 2             |              | 1             | 0.34        | 0.34        |
| NETHERLANDS        |               |            |               | 0             | 5               | 5             |              | 0             | 0.10        |             |
| NORWAY             |               |            |               |               |                 |               |              |               |             |             |
| POLAND             |               |            |               | 1             | 2               | 2             |              | 1             | 0.29        | 0.29        |
| PORTUGAL           |               |            |               | 14            | 21              | 21            |              | 14            | 0.69        | 0.69        |
| ROMANIA            |               |            |               | 0             | 1               | 1             |              | 0             | 0.22        | 0.22        |
| RUSSIA             | 1             | 519        | 1             | 11            | 48              | 48            |              | 12            | 0.26        | 0.26        |
| SLOVAK REP.        |               |            |               |               |                 |               |              |               |             |             |
| SPAIN              | 61            | 824        | 50            | 7             | 3               | 6             | 42           | 13            | 0.26        | 2.23        |
| SWEDEN             |               |            |               | 0             | 0               | 0             |              | 0             | 0.10        | 0.10        |
| SWITZERLAND        |               |            |               | 0             | 4               | 4             | 0            | 0             | 0.08        | 0.09        |
| UKRAINE            |               |            |               | 0             | 3               | 2             |              | 0             | 0.19        | 0.19        |
| UNITED KINGDOM     |               |            |               | 0             | 0               | 0             |              | 0             | 1.27        | 1.27        |
| FORMER YUGOSLAVIA  |               |            |               | 1             | 6               | 6             |              | 1             | 0.20        | 0.20        |
| Europe             | 339           | 1,022      | 346           | 163           | 237             | 247           | 329          | 171           | 0.09        | 0.69        |
| Including EU-27    | 311           | 1,061      | 330           | 130           | 162             | 162           | 320          | 140           | 0.29        | 0.86        |
| CHINA              | 4,600         | 1,456      | 6,700         | 9,607         | 3,127           | 7,875         | 9            | 11,549        | 1.46        | 1.47        |
| TAIWAN             |               |            |               | 48            | 214             | 204           |              | 58            | 0.29        | 0.29        |
| HONG KONG          |               |            |               | 58            | 45              | 11            | 35           | 58            | 1.26        | 5.04        |
| Sub total          | 4,600         | 1,456      | 6,700         | 9,713         | 3,386           | 8,090         | 44           | 11,665        | 1.43        | 1.44        |
| AUSTRALIA          | 420           | 2,181      | 916           | 285           | 0               | 8             | 1,033        | 160           | 0.15        | 21.22       |
| INDONESIA          | 9             | 714        | 6             | 412           | 699             | 600           |              | 518           | 0.86        | 0.86        |
| JAPAN              |               |            |               | 27            | 61              | 60            |              | 28            | 0.46        | 0.46        |
| KOREA, D.R.        |               |            |               | 1             | 5               | 5             |              | 1             | 0.24        | 0.24        |
| KOREA, REP.        |               |            |               | 64            | 311             | 272           |              | 103           | 0.38        | 0.38        |
| MALAYSIA           |               |            |               | 17            | 166             | 15            | 144          | 24            | 0.15        | 1.61        |
| PHILIPPINES        | 0             | 566        | 0             | 4             | 9               | 8             |              | 5             | 0.72        | 0.72        |
| SINGAPORE          |               |            |               | 0             | 12              |               | 12           | 0             | 0.02        |             |
| THAILAND           | 2             | 516        | 1             | 52            | 366             | 353           |              | 67            | 0.19        | 0.19        |
| VIETNAM            | 12            | 465        | 6             | 104           | 480             | 453           |              | 137           | 0.30        | 0.30        |
| E. Asia            | 463           | 2,023      | 937           | 969           | 2,110           | 1,780         | 1,189        | 1,046         | 0.35        | 0.59        |
| AFGHANISTAN        | 45            | 414        | 19            | 18            |                 | 4             | 17           | 16            | 0.76        | 3.80        |
| BANGLADESH         | 48            | 561        | 27            | 9             | 857             | 800           |              | 93            | 0.12        | 0.12        |
| INDIA              | 11,878        | 532        | 6,315         | 1,681         | 277             | 5,100         | 1,304        | 1,869         | 0.29        | 0.37        |
| MYANMAR            | 332           | 421        | 140           | 107           |                 | 201           |              | 45            | 0.23        | 0.23        |
| PAKISTAN           | 2,914         | 720        | 2,097         | 452           | 463             | 2,488         | 80           | 444           | 0.17        | 0.18        |
| SRI LANKA          |               |            |               | 0             | 2               | 2             |              | 0             | 0.11        | 0.11        |
| S. Asia            | 15,219        | 565        | 8,599         | 2,270         | 1,599           | 8,598         | 1,401        | 2,469         | 0.25        | 0.29        |
| IRAN               | 100           | 601        | 76            | 38            | 80              | 131           |              | 63            | 0.48        | 0.48        |
| IRAQ               | 19            | 360        | 7             | 1             | 6               | 13            |              | 1             | 0.09        | 0.09        |
| ISRAEL             | 6             | 1,809      | 11            | 1             |                 |               | 11           | 1             | 0.11        |             |
| SYRIA              | 103           | 976        | 100           | 184           |                 | 100           | 2            | 182           | 1.79        | 1.82        |
| TURKEY             | 500           | 1,380      | 843           | 754           | 599             | 1,404         | 38           | 754           | 0.52        | 0.54        |
| Sub total          | 767           | 1,373      | 1,052         | 985           | 695             | 1,673         | 52           | 1,008         | 0.91        | 0.60        |
| <b>WORLD TOTAL</b> | <b>33,129</b> | <b>777</b> | <b>25,741</b> | <b>17,790</b> | <b>8,574</b>    | <b>23,596</b> | <b>8,574</b> | <b>19,935</b> | <b>0.84</b> | <b>0.84</b> |

\*/ Ending stocks divided by consumption plus exports.

Subtotals and total include countries not shown.

\*\*/ Ending stocks divided by consumption.


**2014/15 SUPPLY AND USE OF COTTON BY COUNTRY February 3, 2014**

|                   | AREA         | YIELD        | PROD            | BEG STKS     | IMPORTS    | CONS         | EXPORTS      | END STKS     | S/U *       | S/MU **      |
|-------------------|--------------|--------------|-----------------|--------------|------------|--------------|--------------|--------------|-------------|--------------|
|                   | 000 Ha       | Kgs/Ha       | 000 Metric Tons |              |            |              |              |              | Ratio       | Ratio        |
| CANADA            |              |              |                 | 0            | 1          | 1            |              | 0            | 0.03        | 0.03         |
| CUBA              | 4            | 272          | 1               | 1            | 2          | 3            |              | 1            | 0.19        | 0.19         |
| DOM. REP.         |              |              |                 |              | 1          | 1            |              | 0            | 0.47        | 0.47         |
| MEXICO            | 119          | 1,533        | 182             | 334          | 133        | 250          | 47           | 351          | 1.18        | 1.40         |
| USA               | 3,401        | 916          | 3,117           | 652          | 2          | 823          | 2,241        | 706          | 0.23        | 0.86         |
| <b>N. America</b> | <b>3,528</b> | <b>935</b>   | <b>3,301</b>    | <b>987</b>   | <b>139</b> | <b>1,080</b> | <b>2,288</b> | <b>1,059</b> | <b>0.31</b> | <b>0.98</b>  |
| EL SALVADOR       |              |              |                 | 11           | 22         | 22           |              | 11           | 0.52        | 0.52         |
| GUATEMALA         |              |              |                 | 9            | 21         | 21           |              | 9            | 0.45        | 0.45         |
| HONDURAS          | 0            | 319          | 0               | 0            |            |              |              | 0            |             |              |
| <b>C. America</b> | <b>2</b>     | <b>515</b>   | <b>1</b>        | <b>21</b>    | <b>42</b>  | <b>43</b>    | <b>0</b>     | <b>21</b>    | <b>0.49</b> | <b>0.49</b>  |
| ARGENTINA         | 600          | 459          | 276             | 281          | 5          | 142          | 38           | 382          | 2.12        | 2.69         |
| BOLIVIA           | 5            | 537          | 3               | 1            | 2          | 3            | 1            | 1            | 0.16        | 0.20         |
| BRAZIL            | 1,063        | 1,551        | 1,649           | 803          | 87         | 925          | 811          | 803          | 0.46        | 0.87         |
| CHILE             |              |              |                 | 0            | 0          | 0            |              | 0            | 0.20        | 0.20         |
| COLOMBIA          | 45           | 796          | 36              | 6            | 46         | 82           | 0            | 6            | 0.08        | 0.08         |
| ECUADOR           | 1            | 440          | 1               | 2            | 11         | 12           |              | 2            | 0.14        | 0.14         |
| PARAGUAY          | 26           | 436          | 11              | 3            |            | 8            | 4            | 2            | 0.19        | 0.28         |
| PERU              | 43           | 903          | 39              | 34           | 58         | 95           | 1            | 34           | 0.36        | 0.36         |
| URUGUAY           |              |              |                 | 0            | 0          | 0            |              | 0            | 0.49        | 0.49         |
| VENEZUELA         | 15           | 368          | 6               | 1            | 7          | 8            |              | 6            | 0.68        | 0.68         |
| <b>S. America</b> | <b>1,798</b> | <b>1,123</b> | <b>2,019</b>    | <b>1,131</b> | <b>217</b> | <b>1,276</b> | <b>855</b>   | <b>1,235</b> | <b>0.58</b> | <b>0.97</b>  |
| ALGERIA           |              |              |                 | 1            | 3          | 3            |              | 1            | 0.19        | 0.19         |
| EGYPT             | 128          | 825          | 106             | 58           | 103        | 134          | 70           | 63           | 0.31        | 0.47         |
| MOROCCO           |              |              |                 | 4            | 32         | 32           |              | 4            | 0.11        | 0.11         |
| SUDAN             | 55           | 363          | 20              | 17           |            | 4            | 16           | 17           | 0.87        | 4.10         |
| TUNISIA           |              |              |                 | 3            | 13         | 13           |              | 3            | 0.21        | 0.21         |
| <b>N. Africa</b>  | <b>184</b>   | <b>686</b>   | <b>126</b>      | <b>83</b>    | <b>151</b> | <b>187</b>   | <b>86</b>    | <b>87</b>    | <b>0.32</b> | <b>0.47</b>  |
| BENIN             | 317          | 288          | 91              | 34           |            | 4            | 95           | 26           | 0.27        | 6.62         |
| BURKINA FASO      | 562          | 453          | 254             | 99           |            | 4            | 243          | 107          | 0.43        | 26.68        |
| CAMEROON          | 203          | 519          | 106             | 58           |            | 2            | 114          | 47           | 0.41        | 25.00        |
| CENT. AFR. REP.   | 34           | 230          | 8               | 3            |            |              | 8            | 3            | 0.39        |              |
| CHAD              | 259          | 160          | 41              | 16           |            | 1            | 41           | 16           | 0.39        | 32.13        |
| COTE D'IVOIRE     | 362          | 472          | 171             | 75           |            | 2            | 187          | 57           | 0.30        | 27.96        |
| GUINEA            | 12           | 272          | 3               | 1            |            |              | 4            | 1            | 0.36        |              |
| MADAGASCAR        |              |              |                 | 3            |            |              |              | 3            |             |              |
| MALI              | 521          | 382          | 199             | 89           |            | 3            | 195          | 90           | 0.45        | 30.00        |
| NIGER             | 5            | 448          | 2               | 0            |            | 1            | 1            | 0            | 0.11        | 0.25         |
| SENEGAL           | 31           | 382          | 12              | 4            |            | 1            | 11           | 4            | 0.34        | 5.25         |
| TOGO              | 110          | 323          | 36              | 7            |            |              | 34           | 9            | 0.26        |              |
| <b>F. Africa</b>  | <b>2,416</b> | <b>382</b>   | <b>923</b>      | <b>390</b>   |            | <b>17</b>    | <b>931</b>   | <b>365</b>   | <b>0.38</b> | <b>21.23</b> |
| ANGOLA            | 3            | 302          | 1               | 0            |            | 1            | 0            | 0            | 0.25        | 0.41         |
| ETHIOPIA          | 129          | 306          | 39              | 1            | 4          | 43           | 1            | 0            | 0.01        | 0.01         |
| GHANA             | 16           | 366          | 6               | 2            | 1          | 1            | 6            | 2            | 0.25        | 1.31         |
| KENYA             | 38           | 185          | 7               | 1            | 0          | 7            | 0            | 1            | 0.09        | 0.10         |
| MALAWI            | 170          | 271          | 46              | 26           |            | 3            | 41           | 28           | 0.63        | 9.32         |
| MOZAMBIQUE        | 165          | 290          | 48              | 29           |            |              | 46           | 31           | 0.68        |              |
| NIGERIA           | 298          | 205          | 61              | 26           | 1          | 19           | 41           | 28           | 0.47        | 1.46         |
| SOUTH AFRICA      | 10           | 962          | 9               | 44           | 22         | 22           | 10           | 44           | 1.40        | 2.05         |
| TANZANIA          | 434          | 197          | 86              | 115          |            | 34           | 47           | 120          | 1.49        | 3.58         |
| UGANDA            | 55           | 387          | 21              | 12           |            | 1            | 19           | 13           | 0.64        | 11.37        |
| CONGO, DR         |              |              |                 | 2            | 8          | 8            |              | 2            | 0.27        | 0.27         |
| ZAMBIA            | 315          | 454          | 143             | 98           |            |              | 90           | 151          | 1.68        |              |
| ZIMBABWE          | 316          | 282          | 89              | 44           |            | 4            | 74           | 56           | 0.71        | 14.83        |
| <b>S. Africa</b>  | <b>1,969</b> | <b>285</b>   | <b>561</b>      | <b>407</b>   | <b>59</b>  | <b>167</b>   | <b>378</b>   | <b>482</b>   | <b>0.88</b> | <b>2.89</b>  |
| KAZAKHSTAN        | 126          | 591          | 75              | 43           | 0          | 16           | 59           | 43           | 0.58        | 2.78         |
| KYRGYZSTAN        | 27           | 835          | 23              | 3            | 3          | 1            | 25           | 3            | 0.11        | 2.92         |
| TAJIKISTAN        | 186          | 539          | 100             | 40           |            | 7            | 94           | 40           | 0.40        | 5.87         |
| TURKMENISTAN      | 550          | 582          | 320             | 219          |            | 152          | 168          | 219          | 0.69        | 1.45         |
| UZBEKISTAN        | 1,284        | 745          | 1,005           | 255          | 1          | 345          | 585          | 331          | 0.36        | 0.96         |
| <b>C. Asia</b>    | <b>2,174</b> | <b>3,292</b> | <b>1,523</b>    | <b>560</b>   | <b>4</b>   | <b>520</b>   | <b>931</b>   | <b>637</b>   | <b>2.13</b> | <b>1.23</b>  |



## 2014/15 SUPPLY &amp; USE OF COTTON BY COUNTRY (cont'd) February 3, 2014

|                   | AREA   | YIELD  | PROD   | BEG STKS | IMPORTS         | CONS   | EXPORTS | END STKS | S/U * | S/MU ** |
|-------------------|--------|--------|--------|----------|-----------------|--------|---------|----------|-------|---------|
|                   | 000 Ha | Kgs/Ha |        |          | 000 Metric Tons |        |         |          | Ratio | Ratio   |
| AUSTRIA           |        |        |        | 3        | 3               | 3      |         | 3        | 0.93  | 0.93    |
| AZERBAIJAN        | 25     | 502    | 13     | 11       |                 | 11     | 4       | 9        | 0.62  | 0.87    |
| BELARUS           |        |        |        | 4        | 11              | 11     |         | 4        | 0.34  | 0.34    |
| BELGIUM           |        |        |        | 5        | 10              | 4      | 6       | 5        | 0.51  | 1.33    |
| BULGARIA          | 0      | 324    | 0      | 4        | 1               | 2      |         | 4        | 2.10  | 2.10    |
| CZECH REP.        |        |        |        | 0        | 5               | 5      | 0       | 0        | 0.05  | 0.05    |
| DENMARK           |        |        |        |          |                 |        |         | 0        |       |         |
| ESTONIA           |        |        |        |          |                 |        |         |          |       |         |
| FINLAND           |        |        |        |          |                 |        |         |          |       |         |
| FRANCE            |        |        |        | 3        | 15              | 14     | 1       | 2        | 0.16  | 0.18    |
| GERMANY           |        |        |        | 24       | 37              | 34     | 4       | 24       | 0.64  | 0.71    |
| GREECE            | 275    | 1,120  | 308    | 50       | 1               | 19     | 277     | 63       | 0.21  | 3.31    |
| HUNGARY           |        |        |        | 0        | 1               | 1      |         | 0        | 0.47  | 0.47    |
| IRELAND           |        |        |        | 0        | 0               | 0      |         | 0        | 3.43  | 3.43    |
| ITALY             |        |        |        | 21       | 48              | 39     | 4       | 25       | 0.58  | 0.64    |
| LATVIA            |        |        |        | 0        | 1               | 1      |         | 0        | 0.10  | 0.10    |
| LITHUANIA         |        |        |        | 0        | 0               | 0      |         | 0        | 0.56  | 0.56    |
| MOLDOVA           |        |        |        | 1        | 2               | 2      |         | 1        | 0.34  | 0.34    |
| NETHERLANDS       |        |        |        | 0        | 5               | 5      |         | 0        | 0.10  |         |
| NORWAY            |        |        |        |          |                 |        |         |          |       |         |
| POLAND            |        |        |        | 1        | 2               | 2      |         | 1        | 0.30  | 0.30    |
| PORTUGAL          |        |        |        | 14       | 20              | 20     |         | 14       | 0.72  | 0.72    |
| ROMANIA           |        |        |        | 0        | 1               | 1      |         | 0        | 0.23  | 0.23    |
| RUSSIA            | 1      | 521    | 1      | 12       | 50              | 50     |         | 13       | 0.26  | 0.26    |
| SLOVAK REP.       |        |        |        |          |                 |        |         |          |       |         |
| SPAIN             | 59     | 803    | 48     | 13       | 3               | 5      | 45      | 13       | 0.27  | 2.46    |
| SWEDEN            |        |        |        | 0        | 0               | 0      |         | 0        | 0.11  | 0.11    |
| SWITZERLAND       |        |        |        | 0        | 4               | 4      | 0       | 0        | 0.09  | 0.09    |
| UKRAINE           |        |        |        | 0        | 2               | 2      |         | 0        | 0.19  | 0.19    |
| UNITED KINGDOM    |        |        |        | 0        | 0               | 0      |         | 0        | 1.31  | 1.31    |
| FORMER YUGOSLAVIA |        |        |        | 1        | 6               | 6      |         | 1        | 0.20  | 0.20    |
| Europe            | 362    | 3,330  | 369    | 171      | 231             | 243    | 342     | 186      | 0.09  | 0.77    |
| Including EU-27   | 335    | 1,063  | 356    | 140      | 154             | 155    | 337     | 157      | 0.32  | 1.01    |
| CHINA             | 4,200  | 1,464  | 6,148  | 11,549   | 2,172           | 7,796  | 7       | 12,065   | 1.55  | 1.55    |
| TAIWAN            |        |        |        | 58       | 193             | 193    |         | 58       | 0.30  | 0.30    |
| HONG KONG         |        |        |        | 58       | 42              | 11     | 31      | 58       | 1.38  | 5.30    |
| Sub total         | 4,200  | 1,464  | 6,148  | 11,665   | 2,407           | 8,001  | 38      | 12,181   | 1.52  | 1.52    |
| AUSTRALIA         | 433    | 2,192  | 948    | 160      | 0               | 7      | 736     | 366      | 0.49  | 50.93   |
| INDONESIA         | 9      | 718    | 6      | 518      | 648             | 690    |         | 483      | 0.70  | 0.70    |
| JAPAN             |        |        |        | 28       | 60              | 60     |         | 28       | 0.46  | 0.46    |
| KOREA, D.R.       |        |        |        | 1        | 5               | 5      |         | 1        | 0.24  | 0.24    |
| KOREA, REP.       |        |        |        | 103      | 285             | 285    |         | 103      | 0.36  | 0.36    |
| MALAYSIA          |        |        |        | 24       | 168             | 16     | 144     | 32       | 0.20  | 2.05    |
| PHILIPPINES       | 0      | 569    | 0      | 5        | 9               | 8      |         | 6        | 0.84  | 0.84    |
| SINGAPORE         |        |        |        | 0        | 12              |        | 13      | 0        | 0.00  |         |
| THAILAND          | 2      | 518    | 1      | 67       | 387             | 388    |         | 67       | 0.17  | 0.17    |
| VIETNAM           | 12     | 465    | 6      | 137      | 548             | 544    |         | 146      | 0.27  | 0.27    |
| E. Asia           | 476    | 2,038  | 969    | 1,046    | 2,122           | 2,010  | 892     | 1,234    | 0.43  | 0.61    |
| AFGHANISTAN       | 45     | 414    | 19     | 16       |                 | 4      | 16      | 14       | 0.66  | 3.15    |
| BANGLADESH        | 48     | 564    | 27     | 93       | 853             | 880    |         | 93       | 0.11  | 0.11    |
| INDIA             | 11,878 | 532    | 6,315  | 1,869    | 288             | 5,508  | 1,095   | 1,869    | 0.28  | 0.34    |
| MYANMAR           | 332    | 423    | 140    | 45       | 5               | 181    |         | 10       | 0.06  | 0.06    |
| PAKISTAN          | 2,856  | 723    | 2,090  | 444      | 564             | 2,613  | 61      | 425      | 0.16  | 0.16    |
| SRI LANKA         |        |        |        | 0        | 2               | 2      |         | 0        | 0.11  | 0.11    |
| S. Asia           | 15,161 | 567    | 8,593  | 2,469    | 1,712           | 9,190  | 1,172   | 2,412    | 0.23  | 0.26    |
| IRAN              | 100    | 607    | 61     | 63       | 71              | 131    |         | 63       | 0.48  | 0.48    |
| IRAQ              | 19     | 362    | 7      | 1        | 6               | 13     |         | 1        | 0.09  | 0.09    |
| ISRAEL            | 7      | 1,963  | 13     | 1        |                 |        | 13      | 1        | 0.10  |         |
| SYRIA             | 72     | 981    | 70     | 182      |                 | 102    | 55      | 96       | 0.61  | 0.94    |
| TURKEY            | 490    | 1,473  | 722    | 754      | 849             | 1,544  | 38      | 742      | 0.47  | 0.48    |
| Sub total         | 726    | 2,592  | 888    | 1,008    | 936             | 1,815  | 107     | 910      | 1.26  | 0.50    |
| WORLD TOTAL       | 32,976 | 771    | 25,413 | 19,935   | 8,020           | 24,541 | 8,020   | 20,807   | 0.85  | 0.85    |

\*/ Ending stocks divided by consumption plus exports.

Subtotals and total include countries not shown.

\*\*/ Ending stocks divided by consumption.