



United States Department of Agriculture

A banner for the Agricultural Outlook Forum. On the left, it says "USDA'S 98TH ANNUAL Agricultural Outlook Forum" over a background of a field with a large white leaf graphic. On the right, it says "VIRTUAL EVENT | FEBRUARY 24-25, 2022" and "New Paths to Sustainability and Productivity Growth" in a cursive font, with a small USDA logo at the bottom right.

USDA'S 98TH ANNUAL  
**Agricultural  
Outlook Forum**

VIRTUAL EVENT | FEBRUARY 24-25, 2022  
*New Paths to  
Sustainability and  
Productivity Growth*



# Cotton Outlook

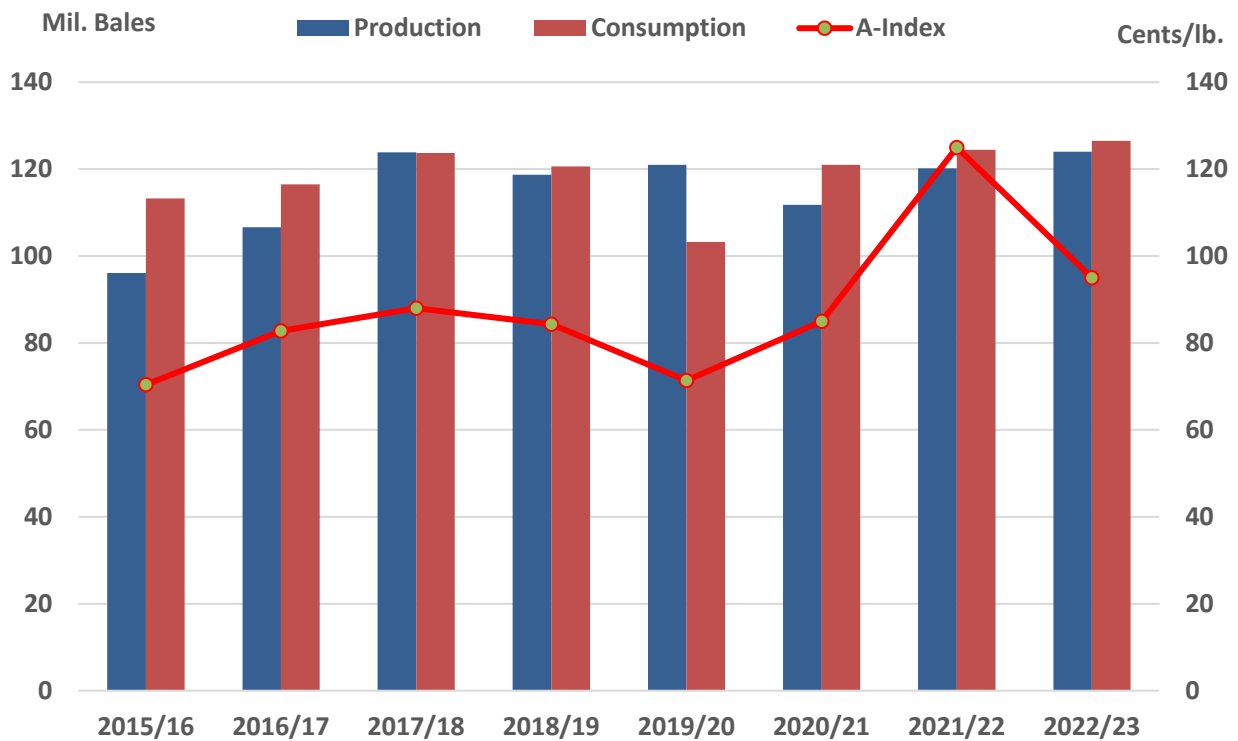
**Thursday, February 24, 2022**

**THE WORLD AND UNITED STATES COTTON OUTLOOK**  
 James Johnson, Stephen MacDonald, Leslie Meyer, and Graham Soley.  
 U.S. Department of Agriculture

**Introduction**

The U.S. Department of Agriculture’s (USDA’s) first 2022/23 world cotton projections anticipate that global consumption will exceed production, reducing world stocks by 2.5 million bales. World cotton production is expected to rise 3.2 percent, with harvested area rising in some countries. Global consumption is expected to grow at about the long-term average rate, as the world economy continues its recovery from the severe downturn in 2020 and supply chain problems in 2021. It is expected that China’s imports will rise from the level forecasted for 2021/22 as its textile use grows and it rebuilds government-held stocks. The A-Index is forecast to fall 30 cents to average 95 cents per pound as prices decline from the decade high levels of 2021/22.

**World Production, Consumption, and Prices  
 2015/16 through 2022/23 projection**

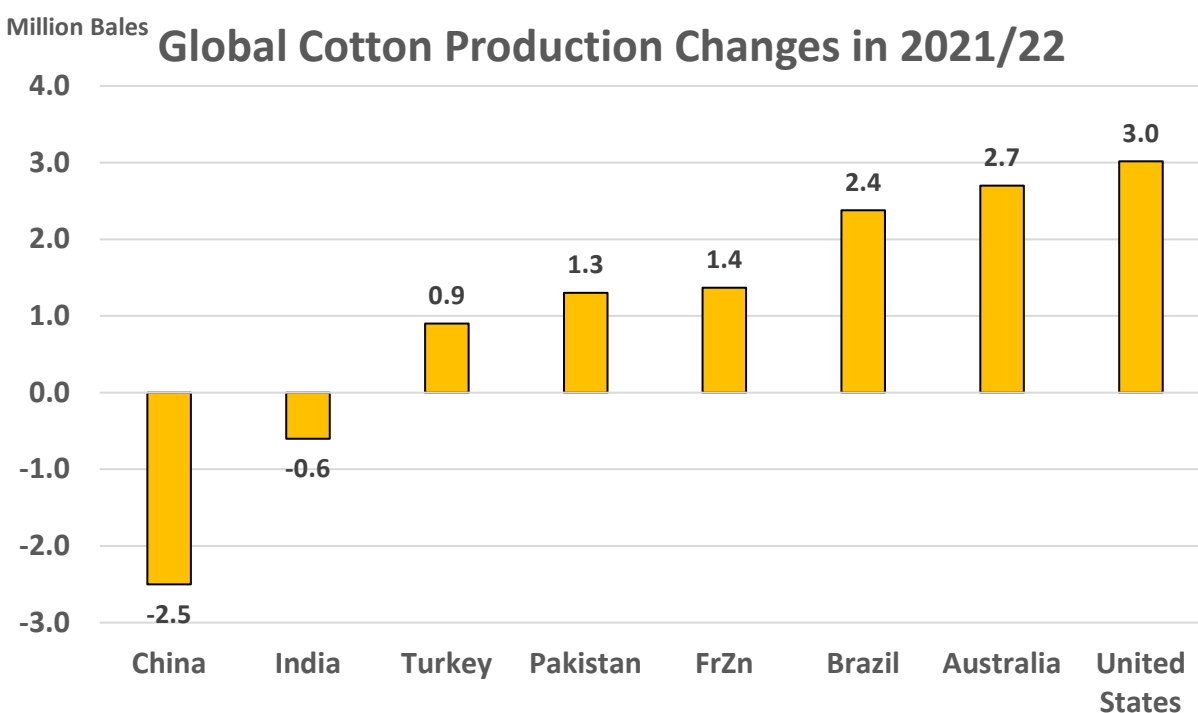


U.S. 2022/23 cotton production is expected to rise to 18.2 million bales, based on a 13 percent increase in planted area, but only a 2 percent increase in harvested area, as abandonment

increases from 2021/22's unusually low average. Domestic mill use is projected slightly higher, and exports are projected at 15.5 million bales, also up from their 2021/22 levels. Ending stocks are projected marginally higher, but unchanged relative to use.

### World Cotton Situation, 2021/22

#### World Cotton Production, 2021/22



Global 2021/22 cotton production is up 7.5 percent from the previous year to 120.2 million bales, as most major producing countries witnessed increases, excluding China and India. The United States saw a 20.6 percent increase with significantly higher area harvested, especially in Texas. U.S. 2021/22 area harvested was up roughly 20 percent to 4.0 million hectares, and recorded a yield of 951 kg/hectare, practically unchanged from the previous year's 950 kg. Pakistan's production climbed 28.9 percent to 5.8 million bales, owing to higher yields which recovered from the previous year's lowest in nearly 40 years. Australia and Brazil production are projected higher on greater area harvested, with Australia projected at a record-tying 5.5 million bales set in 2011/12.

China's 2021/22 crop is estimated at 27.0 million bales, down 2.5 million bales from the previous year and the lowest level in 5 years. Area harvested is estimated down on lower

plantings in Eastern China, where cotton production continued on its downward trend as producers there exit the sector. Yield is estimated down to 1,896 kg/hectare from a record 1,976 kg but still the second-highest level.

India's 2021/22 production is estimated at 27 million bales, down roughly 2 percent from the preceding year on lower area harvested despite higher yields. The harvested area is estimated at 12.4 million hectares, down nearly 5 percent from last year. The area decrease is due to the late arrival of the 2021 southwest monsoon and competition with other crops such as soybeans and pulses. India's 2021/22 yield is estimated at 474 kg/hectare, up slightly from the previous season due in part to a more favorable northeast monsoon during October-December.

China first replaced the United States as the world's largest cotton-producing country in 1980, and then maintained that rank for nearly 35 years starting in 1982. In 2015, China relinquished the top rank following significant reforms to its support for producers and as rising wages reduced the profitability of cotton farming in the Yellow River and Yangtze River basins. Modernization of India's cotton production—including the adoption of Bt varieties—propelled India to the first rank among cotton producing countries in 2015, but variable weather and developing problems with bollworm resistance helped drop India to the number two spot in 2020, and in 2021 India and China are tied as the largest cotton-producer. The United States is the next largest producer after India and China, followed by Brazil and Pakistan.

#### 2021/22 China Supply and Demand

### **China Cotton Supply and Demand 2020/21 and 2021/22**

<b>Attribute</b>	<b>Unit</b>	<b>2020/21</b>	<b>2021/22</b>	<b>Change (%)</b>
<b>Beginning Stocks</b>	<b>mil. bales</b>	<b>36.9</b>	<b>39.3</b>	<b>6.4</b>
<b>Area Harvested</b>	<b>mil. HA</b>	<b>3.3</b>	<b>3.1</b>	<b>-4.6</b>
<b>Production</b>	<b>mil. bales</b>	<b>29.5</b>	<b>27.0</b>	<b>-8.5</b>
<b>Imports</b>	<b>"</b>	<b>12.9</b>	<b>9.5</b>	<b>-26.1</b>
<b>Total Supply</b>	<b>"</b>	<b>79.3</b>	<b>75.8</b>	<b>-4.4</b>
<b>Exports</b>	<b>"</b>	<b>0.0</b>	<b>0.1</b>	<b>650.0</b>
<b>Use</b>	<b>"</b>	<b>40.0</b>	<b>39.5</b>	<b>-1.3</b>
<b>Total Use</b>	<b>"</b>	<b>40.0</b>	<b>39.6</b>	<b>-1.1</b>
<b>Ending Stocks</b>	<b>"</b>	<b>39.3</b>	<b>36.2</b>	<b>-7.8</b>
<b>State Reserve</b>	<b>"</b>	<b>10.5</b>	<b>9.5</b>	<b>-9.5</b>
<b>Stock to Use %</b>	<b>%</b>	<b>98.1</b>	<b>91.4</b>	<b>-6.7</b>

China's 2021/22 consumption is expected to decline slightly to 39.5 million bales after rebounding more than 20 percent in the previous season. Imports are forecast at 9.5 million bales, down sharply from the previous season. A portion of the decline is due to a drawdown of non-customs cleared cotton (NCCC) from port warehouses. It is estimated that the inventory of NCCC will decrease by roughly 1.5 million bales during 2021/22. A buildup of NCCC inventory during 2020/21 inflated the volume of imports relative to demand, either mill demand or demand for inclusion in the State Reserve. Likewise, the drawdown of NCCC inventory in 2021/22 will mean that the import volume will under-represent the demand in China for imported cotton.

China's stocks are expected to decline by 3.1 million bales. State Reserve levels are estimated lower in 2021/22 on an international marketing year (Aug.-Jul.) basis.

### 2021/22 World Consumption, Trade, Ending Stocks, and Prices

World cotton consumption in 2021/22 is expected to reach a record 124.4 million bales, up 2.8 percent. Consumption growth is forecast for all major consuming countries, except China. Mexico and Turkey are expected to see growth rates above 10 percent as proximity to the United States and the EU, respectively, benefited operations in those countries in light of the global logistics challenges.

### **World Cotton Supply and Demand 2020/21 and 2021/22**

<b>Attribute</b>	<b>Unit</b>	<b>2020/21</b>	<b>2021/22</b>	<b>Change (%)</b>
<b>Beginning Stocks</b>	<b>mil. bales</b>	<b>97.5</b>	<b>88.7</b>	<b>-9.0</b>
<b>Area Harvested</b>	<b>mil. HA</b>	<b>31.1</b>	<b>32.3</b>	<b>3.8</b>
<b>Production</b>	<b>mil. bales</b>	<b>111.8</b>	<b>120.2</b>	<b>7.5</b>
<b>Imports</b>	<b>"</b>	<b>49.1</b>	<b>46.4</b>	<b>-5.5</b>
<b>Total Supply</b>	<b>"</b>	<b>209.3</b>	<b>208.8</b>	<b>-0.2</b>
<b>Exports</b>	<b>"</b>	<b>48.7</b>	<b>46.4</b>	<b>-4.6</b>
<b>Use</b>	<b>"</b>	<b>121.0</b>	<b>124.4</b>	<b>2.8</b>
<b>Total Use</b>	<b>"</b>	<b>121.0</b>	<b>124.5</b>	<b>2.9</b>
<b>Ending Stocks</b>	<b>"</b>	<b>88.7</b>	<b>84.3</b>	<b>-4.9</b>
<b>Stock to Use %</b>	<b>%</b>	<b>73.3</b>	<b>67.8</b>	<b>-5.5</b>

World trade is expected to decrease about 5 percent from 2020/21's record level, driven largely by the decline in imports by China. Import demand in other top markets is mixed with imports by Bangladesh and Turkey down and imports by Vietnam and Pakistan up. Despite 2021/22 U.S. production being up more than 20 percent, total supplies are lower due to reduced carryin. U.S.

exports are forecast down 10 percent at 14.75 million bales due to reduced supplies and increased logistical problems.

Brazil exports are projected down nearly 25 percent from the record 11.0 million bales in 2020/21. India exports are forecast down 8 percent on lower supply and increased domestic use. Australia exports are forecast to increase by 175 percent to 4.3 million bales as production recovered from the extreme drought-reduced crops of 2019 and 2020.

World ending stocks are estimated at 84.3 million bales, down 4.4 million from the previous year. India stocks are down sharply on lower production, higher use, and relatively strong exports. Australia and Brazil are both expected to see higher ending stocks as the Southern Hemisphere producers' late season production increases. As noted earlier, U.S. stocks are projected to increase marginally.

### **U.S. Cotton Situation, 2021/22**

#### **Area and Production**

U.S. all-cotton production in 2021/22 is estimated at 17.6 million bales, 21 percent above last season's crop. Cotton planted acreage in 2021—at 11.2 million acres—decreased 7 percent, as relative prices favored alternative crops over cotton. Planted area to cotton was the lowest in 5 years, but the abandonment rate was a relatively low 11 percent in 2021—compared with the previous 3-year average of nearly 26 percent. As a result, U.S. harvested area reached 10.0 million acres in 2021, one of the highest of the previous decade, while the yield was marginally above last season's level at 849 pounds per harvested acre. Upland production is estimated at approximately 17.3 million bales—3.2 million above 2020—with an average yield of 841 pounds per harvested acre, similar to the 3-year average. Extra-long staple (ELS) cotton production is estimated at 367,000 bales, as the lowest area in 35 years helped reduce the ELS crop to its lowest since 1995.

#### **U.S. Cotton Area, Abandonment, Yield, and Production**

	<b>Unit</b>	<b><u>2017/18</u></b>	<b><u>2018/19</u></b>	<b><u>2019/20</u></b>	<b><u>2020/21</u></b>	<b><u>2021/22</u></b>
<b>Planted acres</b>	<b>mil. acres</b>	<b>12.7</b>	<b>14.1</b>	<b>13.7</b>	<b>12.1</b>	<b>11.2</b>
<b>Harvested acres</b>	<b>mil. acres</b>	<b>11.1</b>	<b>10.0</b>	<b>11.5</b>	<b>8.3</b>	<b>10.0</b>
<b>Abandonment rate</b>	<b>%</b>	<b>12.7</b>	<b>29.1</b>	<b>16.3</b>	<b>31.6</b>	<b>11.1</b>
<b>Yield/harvested acre</b>	<b>lbs./acre</b>	<b>905</b>	<b>882</b>	<b>831</b>	<b>847</b>	<b>849</b>
<b>Production</b>	<b>mil. Bales</b>	<b>20.9</b>	<b>18.4</b>	<b>19.9</b>	<b>14.6</b>	<b>17.6</b>

Compared with last season, 2021 upland cotton production was larger in two of the four Cotton Belt regions. In the Southwest, the upland cotton crop was 3 million bales higher at 8.5 million bales, the largest in 4 years, accounting for 49 percent of the total U.S. upland production. Dry conditions followed by rains and cooler temperatures slowed planting and crop progress early in

the season. However, conditions into harvest improved, keeping 2021 abandonment at a relatively low 17 percent for the region, compared with the 3-year average of 40 percent. The Southwest accounted for about 59 percent of the U.S. upland harvested acreage in 2021, one of the highest on record. Meanwhile, the Southwest yield rose above last season and the 3-year average to 706 pounds per harvested acre.

Southeast cotton production increased 12 percent in 2021 to nearly 4.5 million bales, slightly below the 3-year average and contributing 26 percent of the U.S. upland crop. Cotton area was slightly below 2020 at 2.3 million acres—the lowest in 5 years—as some area shifted to corn and soybeans. Favorable growing conditions pushed the 2021 Southeast yield to 933 pounds per harvested acre, the second highest in 7 years and fourth highest on record.

Meanwhile, Delta cotton production in 2021 decreased about 7 percent from the previous year to 3.8 million bales, the region’s lowest crop in 5 years and accounting for only 22 percent of the total U.S. upland production. Planted area declined to only 1.6 million acres, the lowest since 2016. With average abandonment, harvested area was also the smallest in 5 years. However, the Delta yield increased in 2021 to 1,148 pounds per harvested acre—slightly above the 3-year average.

**U.S. Cotton Supply and Demand  
2020/21 and 2021/22 est.**

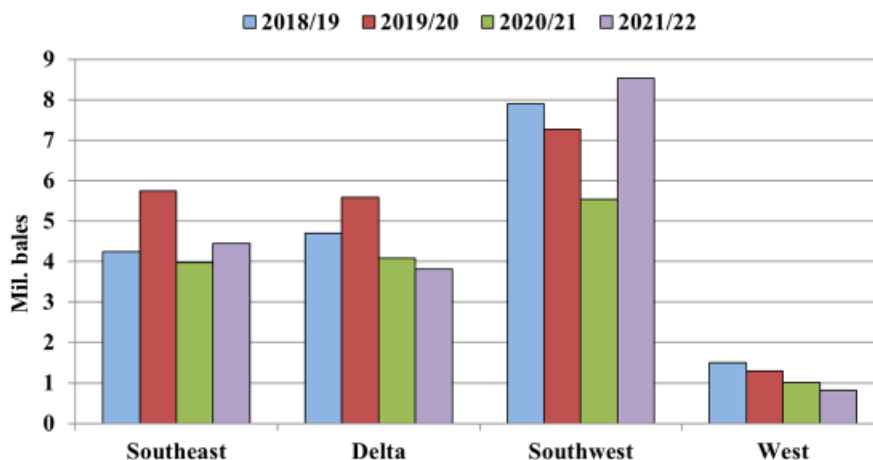
	<b>Unit</b>	<b>2020/21</b>	<b>2021/22</b>	<b>Change (%)</b>
<b>Beg. Stocks</b>	<b>mil bales</b>	<b>7.3</b>	<b>3.2</b>	<b>-56.6</b>
<b>Production</b>	<b>"</b>	<b>14.6</b>	<b>17.6</b>	<b>20.6</b>
<b>Imports</b>	<b>"</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Total supply</b>	<b>"</b>	<b>21.9</b>	<b>20.8</b>	<b>-4.9</b>
<b>Mill use</b>	<b>"</b>	<b>2.4</b>	<b>2.6</b>	<b>6.3</b>
<b>Exports</b>	<b>"</b>	<b>16.4</b>	<b>14.8</b>	<b>-9.9</b>
<b>Total use</b>	<b>"</b>	<b>18.8</b>	<b>17.3</b>	<b>-7.8</b>
<b>Ending stocks</b>	<b>"</b>	<b>3.2</b>	<b>3.5</b>	<b>11.1</b>
<b>Stocks-to-use</b>	<b>%</b>	<b>16.8</b>	<b>20.2</b>	<b>3.4</b>
<b>Farm price</b>	<b>cents/lb.</b>	<b>66.3</b>	<b>90.0</b>	<b>35.7</b>

Upland area and production in the West declined for the fourth consecutive season in 2021. Planted area totaled 182,000, the lowest in 6 years. The region’s yield increased to 1,339 pounds per harvested acre, the highest in 3 years. Despite the West’s yield rebound, upland production totaled only 477,000 bales—the lowest in more than 8 decades—accounting for less than 3 percent of the U.S. upland crop in 2021.

ELS cotton area—grown mainly in the West—was also lower in 2021, with planted area at

127,000 acres. Coupled with a below-average yield this season of 1,423 pounds per harvested acre, ELS production reached only 367,000 bales, the lowest in more than 20 years. California accounted for 84 percent of the total ELS crop in 2021.

### U.S. Cotton Regional Production, 2018/19 to 2021/22



#### Domestic Mill Use and Consumer Demand

U.S. cotton mill use in 2021/22 is forecast at 2.55 million bales, a moderate increase from last season’s 2.4 million bales. Mill use is expected to rise this season as economic activity continues to recover from the pandemic and despite cotton prices that have risen significantly making polyester fiber potentially more competitive. During the first 5 months of 2021/22, cotton mill use surpassed 1 million bales, 7 percent above a year earlier. Likewise, the pace of U.S. cotton mill use during the remaining months of this season is expected to exceed last year, with 2021/22 mill use reaching the highest in 3 years.

U.S. consumer demand for textile and apparel products generally follows the global economy. With the U.S. and global GDP recovering in calendar year 2021, total U.S. fiber product imports also increased. Based on the 2021 data, fiber product imports rose 22 percent—compared with a year earlier—with synthetic and cotton fiber products accounting for 92 percent of total imports. Similarly, total U.S. fiber product exports advanced 20 percent in 2021, with all fiber products indicating considerable gains.

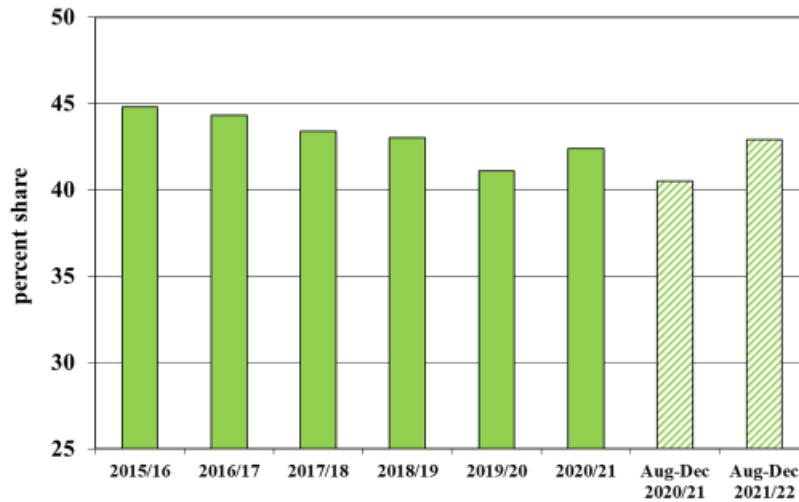
In calendar 2021, U.S. cotton textile and apparel imports rebounded 30 percent to 21.2 million bale-equivalents—the highest since 2007—while synthetic product imports rose about 15.5 percent. Although competitively-priced synthetic fibers—like polyester—and consumer demand



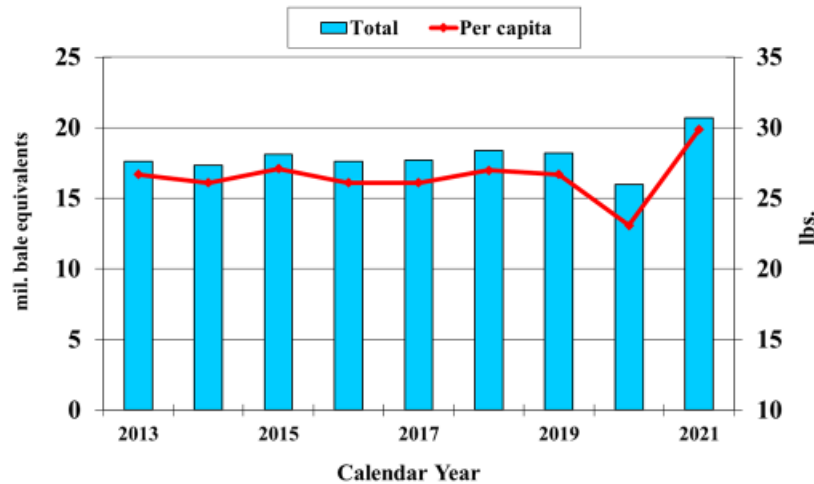
for athleisure clothing continued, the U.S. cotton product import share increased slightly. In calendar 2021, the cotton product import share approached 43.5 percent, compared with 41 percent in 2020 and 42.5 percent in 2019. In contrast, synthetic product imports accounted for 49 percent of the total in calendar 2021, compared with 51.5 percent in 2020 and 50 percent in 2019.

Meanwhile, U.S. cotton product exports increased 29 percent during 2021 to about 3.0 million bale-equivalents, compared with the previous year's pandemic-affected 25-year low. As a result, U.S. domestic consumption of cotton (mill use plus net textile trade) in calendar 2021 is estimated to have increased to 20.7 million bale-equivalents, well above 2020's 16 million bale-equivalents and the highest since 2008. In addition, U.S. per capita cotton consumption in 2021 is also estimated considerably higher than the previous year at approximately 30 pounds, compared with 2020's 23 pounds and the 5-year average of 26 pounds.

**Cotton's Share of U.S. Textile Imports,  
2015/16 to Aug-Dec 2021/22**  
(raw-fiber-equivalent basis)



## U.S. Domestic Cotton Consumption: Total and Per Capita



## World Cotton Outlook, 2022/23

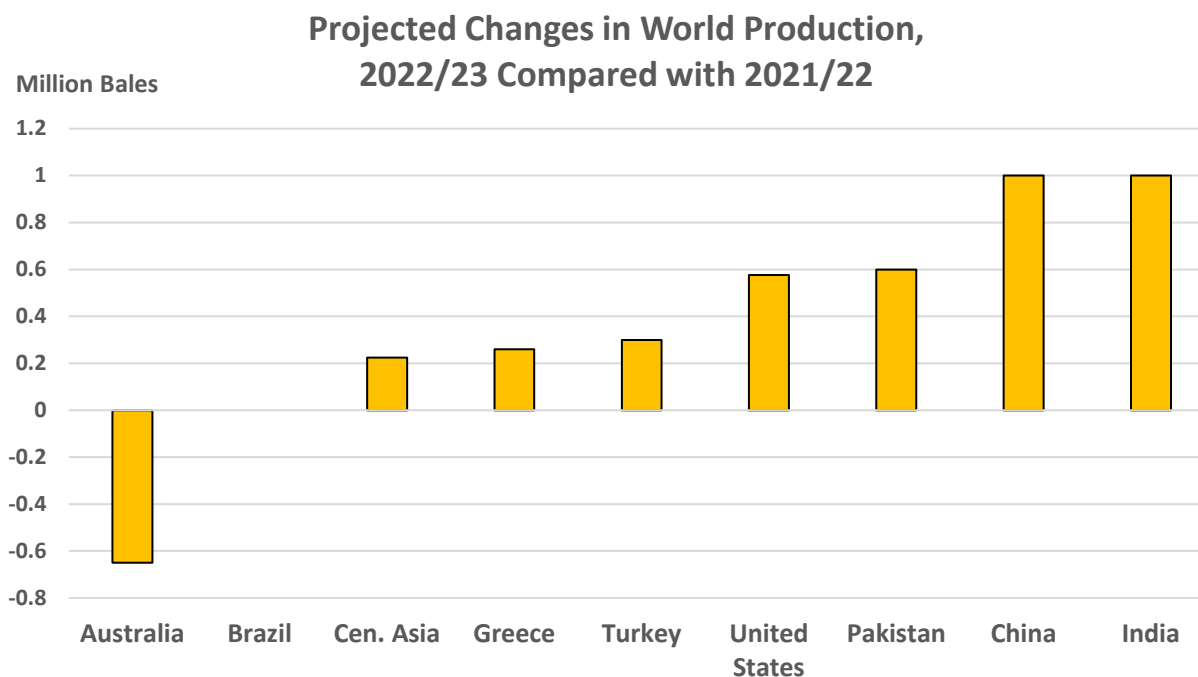
### World Cotton Production, 2022/23

World cotton production is expected to rise about 3 percent or 3.8 million bales from the year before in 2022/23, to 124 million bales. This would be the largest global cotton crop since 2017/18, a crop of equivalent size, and would be only 3 percent smaller than the record crop of 2011/12. Cotton area is expected to rise in most cotton producing regions as high cotton prices encourage expansion, tempered by relatively high prices for some competing crops and higher input prices.

China's production is expected to rise 1 million bales to 28.0 million in 2022/23 as producers in Xinjiang increase area slightly and yields there also rise slightly, coming closer to trend levels after a dip in 2021/22. Supplies of irrigation water in 2022/23 in Northern Xinjiang face some uncertainty as the snowpack through the end of January lags the previous year, but conditions are better for Southern Xinjiang's catchment areas.

Producers' surveys generally indicate higher area is likely for Xinjiang, but with only a small increase expected. Producers there have for a number of years benefited from subsidies based on a target price that is well above typical global market prices. During 2021/22, producers marketed their cotton at well above the target price of 18,600 RMB (133 cents/lb), in part reflecting the global surge in prices. Outside of Xinjiang, area intentions' surveys are mixed, and

the forecast for total planted cotton area in 2022/23 is unchanged from the year before.



In India, production is also projected to rise 1 million bales to 28.0 million, and China and India will again be tied for the ranking as the world's large cotton-producing country. Cotton prices in India have gained significantly relative to a range of competing crops, compared with a year ago, by 25-30 percent as of January according to data from India's Department for Promotion of Industry and Internal Trade. Area could rise more than 5 percent in 2022/23 from the year before, but a slightly decline in yield is predicted, using the median of the previous 5 years as the forecast. With the larger area, production is still expected to rise.

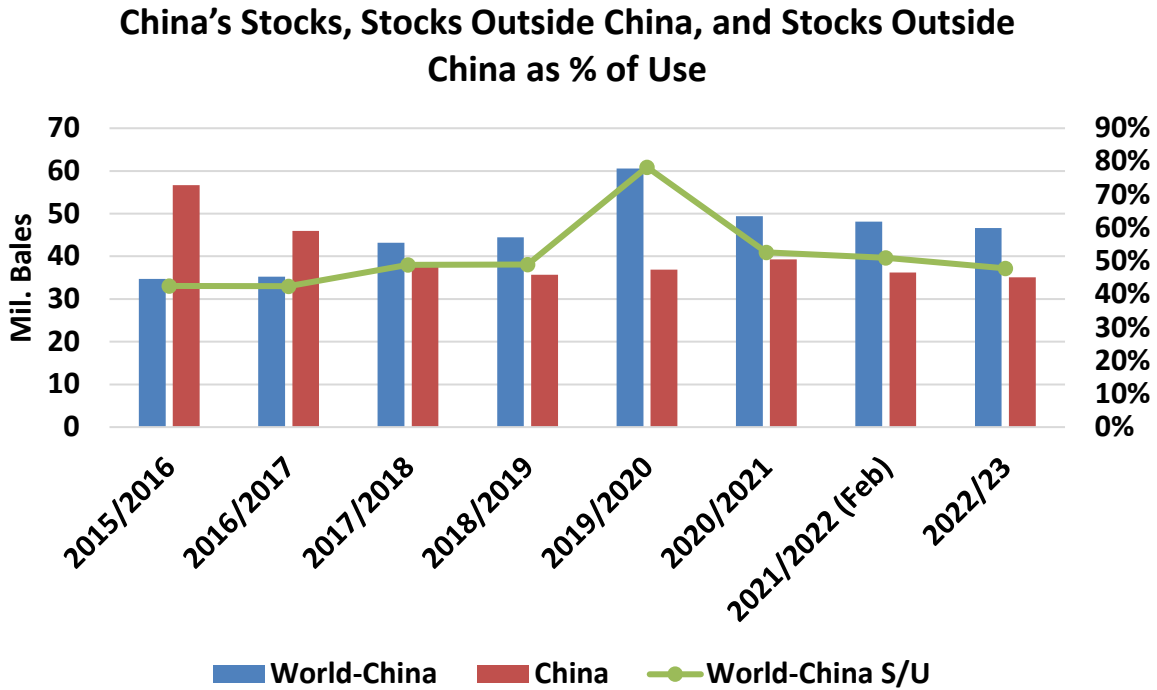
Similarly, in Pakistan, producers have indicated plans to increase area devoted to cotton, and with indications of favorable supplies of water for irrigation in 2022/23, cotton production is expected to increase 600,000 bales. Pakistan's yields have been quite variable in recent years, but the estimated yield for 2021/22 matched the 5-year median level, so the yield forecast for 2022/23 is unchanged from the year before.

Elsewhere in the Northern Hemisphere, cotton production in Turkey and Central Asia is also expected to benefit from relatively high cotton prices and winter precipitation during 2021/22, and higher production compared with a year earlier is foreseen there, as well as in Greece and Egypt.

In the Southern Hemisphere, Brazil's 2022/23 cotton output is projected to be unchanged from its 2021/22 level, indicating the uncertainty around the offsetting impacts of likely lower cotton

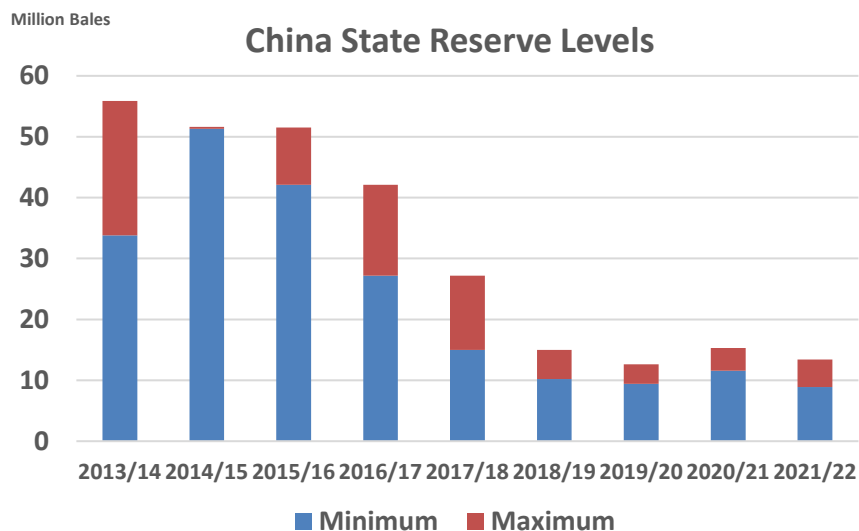
prices during planting in the Center West in January 2023 and the lagged impact of higher cotton prices this year. Australian production is projected to be 600,000 bales lower than the year before in 2022/23, as the highly variable dryland area and yields return to long-run average levels and normal weather also results in slightly lower—although still relatively high—reservoir fill levels.

USDA Projections for China, 2022/23



USDA’s China outlook is based on the policies outlined in the Appendix. Production and use are forecast up slightly, while stocks are expected to decline to the lowest level since 2011/12. China’s production is projected to increase slightly, with slightly higher area and yields in Xinjiang. Xinjiang yields are expected to increase from the 2021 crop on the assumption of average weather conditions. China’s consumption is projected to increase, but at a rate slower than the world average.

With the projected price ratios between internal and world prices, State Reserve purchases of domestic cotton during the 2022/23 marketing year are likely to be limited at best. The State Reserve is likely to both buy and sell cotton during the 2022/23 season as it implements its stated policy of rotating cotton through the State Reserve, although the overall volume is expected to remain in the range observed in recent years.



China's State Reserve are believed to have sold off nearly all of its stocks of 2011, 2012, and 2013 domestic cotton. Remaining stocks are predominantly imported cotton, primarily U.S. and Brazilian, from the 2018 through 2020 crops and some 2019 domestic cotton. Foreign cotton is expected to be acquired by the State Reserve during the remainder of CY 2022.

### China Cotton Supply and Demand 2021/22 and 2022/23 est.

Attribute	Unit	2021/22	2022/23	Change (%)
Beginning Stocks	mil. bales	39.3	36.2	-7.8
Area Harvested	mil. HA	3.1	3.1	0.0
Production	mil. bales	27.0	28.0	3.7
Imports	"	9.5	11.0	15.8
Total Supply	"	75.8	75.2	-0.8
Exports	"	0.1	0.1	0.0
Use	"	39.5	40.0	1.3
Total Use	"	39.6	40.1	1.3
Ending Stocks	"	36.2	35.1	-3.0
State Reserve	"	9.5	10.5	10.5
Stock to Use %	%	91.4	87.5	-3.9

### World Cotton Consumption, 2022/23

World cotton consumption is expected to rise for the third consecutive year in 2022/23, but grow more slowly than during the previous 2 years. World cotton consumption grew at a 1.7 percent annual rate over 1960-2021, but marketing years 2020/21 and 2021/22 saw consumption increases 17 percent and 3 percent, respectively, as first the recovery from the initial shock of the COVID pandemic supported the year-to-year expansion, and then as changes in consumers' clothing preferences and a sustained shift from spending on services to spending on goods sustained an above-average rate of consumption growth through 2021/22. At 124.4 million bales, USDA's forecast for global consumption in 2021/22 is marginally higher than the previous record level of 124.2 million bales achieved more than a decade earlier in 2006/07. In 2022/23, world consumption is projected to be 2.1 million bales higher than the year before, at 126.5 million bales.

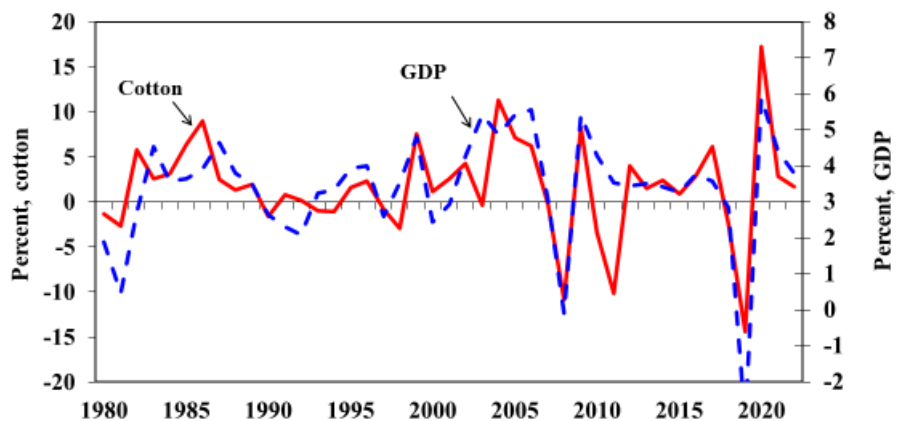
Considerable uncertainty surrounds all economic projections that reach into calendar year 2023, as both the course of the COVID pandemic and the resulting developments in the world economy have confounded many well-grounded forecasts over the last 2 years. Most forecasts incorporate assumptions that a mix of more effective medical technology and a rising degree of global immunity will limit the magnitude and impact of future waves of COVID infection. This suggests there are downside risks to these forecasts if new variants prove more dangerous. Similarly, there is clearly a heightened risk that military conflict in Eastern Europe has a negative impact on global economic growth, and therefore on cotton consumption. The forecasts here assume that no extensive conflict occurs.

World consumption growth in 2022/23 is projected at the long run average rate as a variety of potentially negative and positive factors are expected to about offset each other. Positive factors include changes in consumer clothing preferences that favor cotton in part brought about by structural change in workplace arrangements. The extensiveness of remote working is almost certainly expected to decline as concerns regarding COVID infection are mitigated, but it is highly unlikely that the level of office-based rather than domicile-based working arrangements will return to pre-pandemic levels, shifting wardrobe requirements in ways favorable to cotton. Similarly, strenuous efforts to acquire inventory will likely ease over time, but new perceptions of supply chain risk are likely to drive efforts to maintain higher inventories than were held before 2020. Finally, enhanced spinners' profitability in recent years is likely to drive efforts to increase spinning capacity.

Negative factors include a slowing rate of world economic growth. The International Monetary Fund's January 25, 2022 forecast update indicated expected global GDP growth of 4.4 percent and 3.8 percent in calendar years 2022 and 2023, respectively. Thus, while calendar year 2023 expected economic growth is above the 2015-19 average rate of 3.4 percent, it is only marginally above it, and is notably lower than the 2022 rate. The high price of cotton during 2021/22 is also

a potentially negative factor: in real terms the A Index rose 18 percent in 2020/21 and a projected 35 percent in 2021/22. Relative to polyester, the price of cotton has surpassed even the relative peak seen during the 2010/11 price surge. While cotton consumption growth has been sustained with a steadily rising cotton/polyester ratio in recent years, the jump during 2021/22 stands out for both its speed and its height. Finally, while the economic effect of the expected mitigation of COVID impacts on spending, logistical problems, and employment will be broadly positive, these changes will likely also be associated with a relative shift of consumer spending towards services and away from goods. Although this shift is expected to affect spending on durable goods more than spending on clothing, it is a risk factor.

### World Cotton Consumption and Economic Growth



Sources: USDA and International Monetary Fund.

### World Trade, Stocks, and Prices, 2022/23

World trade in 2022/23 is projected at 48.5 million bales, just below the record set two years prior. The world's largest importer, China, is expected to account for most of the increase as its imports rise to 11.0 million bales. Increases are also expected for Vietnam and Bangladesh. Exports from the United States, Brazil, and Greece are expected to be higher.

Global ending stocks are forecast down 3 percent to 81.7 million bales despite larger total supplies and amidst higher use. China stocks are expected down, with lower free stocks more than offsetting higher State Reserve supplies. Global 2022/23 stocks are expected to decline for the third consecutive year, with India accounting for significant portion of the downfall since 2019/20.

**World Cotton Supply and Demand 2021/22 and  
2022/23 est.**

<b>Attribute</b>	<b>Unit</b>	<b>2021/22</b>	<b>2022/23</b>	<b>Change (%)</b>
<b>Beginning Stocks</b>	<b>mil. bales</b>	<b>88.7</b>	<b>84.3</b>	<b>-4.9</b>
<b>Area Harvested</b>	<b>mil. HA</b>	<b>32.3</b>	<b>33.6</b>	<b>4.2</b>
<b>Production</b>	<b>mil. bales</b>	<b>120.2</b>	<b>124.0</b>	<b>3.2</b>
<b>Imports</b>	<b>"</b>	<b>46.4</b>	<b>48.5</b>	<b>4.4</b>
<b>Total Supply</b>	<b>"</b>	<b>208.8</b>	<b>208.3</b>	<b>-0.2</b>
<b>Exports</b>	<b>"</b>	<b>46.4</b>	<b>48.5</b>	<b>4.4</b>
<b>Use</b>	<b>"</b>	<b>124.4</b>	<b>126.5</b>	<b>1.7</b>
<b>Total Use</b>	<b>"</b>	<b>124.5</b>	<b>126.6</b>	<b>1.7</b>
<b>Ending Stocks</b>	<b>"</b>	<b>84.3</b>	<b>81.7</b>	<b>-3.1</b>
<b>Stock to Use %</b>	<b>%</b>	<b>67.8</b>	<b>64.6</b>	<b>-3.2</b>

Despite lower ending stocks and higher global consumption, price levels in 2022/23 are expected down in both the United States and in international markets. After registering an 11-year high, the A Index's marketing year average is forecast down 30 cents to 95 cents/pound.

**U.S. Cotton Outlook for 2022/23**

Area, Production, and Supply

The early USDA projection for 2022 U.S. cotton planted acreage is 12.7 million acres, 13 percent above 2021's 11.2 million acres and the highest in 3 years. Historically, the relationship between expected harvest prices for cotton relative to corn and soybeans has played a key role in the cotton area planted. Cotton harvest futures prices from mid-January through mid-February 2022 averaged about 22 cents (28 percent) above price expectations in early 2021; for the same period, price increases were also seen for corn (+28 percent) and soybeans (+18 percent), indicating that alternative crop prices are relatively similar or slightly less competitive this year.

Additional contributing factors to acreage decisions include the cotton farmers' experiences during the previous season and the soil moisture conditions heading into planting season. Cotton yields in 2021 were above the year before in each of the Cotton Belt regions, with the Delta experiencing near-record yields. In the Southwest—where nearly 60 percent of the U.S. upland cotton area was harvested in 2021—yields were the highest in 3 years. Additionally, dry conditions this winter in the Southwest provide further uncertainty as the 2022 spring planting season approaches.



**U.S. Cotton Area, Yield, and Production  
2021/22 and 2022/23 proj.**

	<u>Unit</u>	<u>2021/22</u>	<u>2022/23</u>	<u>Change (%)</u>
<b>Planted area</b>	<b>mil. acres</b>	<b>11.22</b>	<b>12.70</b>	<b>13.2</b>
<b>Harvested area</b>	<b>"</b>	<b>9.97</b>	<b>10.20</b>	<b>2.3</b>
<b>Abandonment rate</b>	<b>%</b>	<b>11.1</b>	<b>19.7</b>	<b>8.6</b>
<b>Yield/harvested acre</b>	<b>lbs./acre</b>	<b>849</b>	<b>856</b>	<b>0.8</b>
<b>Production</b>	<b>mil. bales</b>	<b>17.62</b>	<b>18.20</b>	<b>3.3</b>

The USDA area projection is 5.5 percent (665,000 acres) above the recent National Cotton Council (NCC) survey, which indicated 2022 cotton plantings slightly above 12 million acres. The NCC survey was released on February 13, reflecting responses received from mid-December through mid-January. Survey respondents reported expected increases in 2022 upland cotton area for three of the four Cotton Belt regions, with a decline reported for the West region.

In the Southeast, the NCC survey indicated that cotton acreage would rise about 4 percent in 2022, with gains expected for each State, except Florida. The Southeast acreage increase is expected to come from corn (and to a lesser extent peanut) area. For the Delta region, 2022 cotton intentions were higher across all States—a 14.5-percent increase in cotton area is expected to reduce corn acreage. In the Southwest, the survey revealed a 7-percent rise in cotton acreage—a shift from sorghum—with most of the gain attributable to producers in Texas, although Oklahoma and Kansas producers also planned to plant more cotton. In the West, the NCC reported that upland cotton acreage is projected 14 percent lower in 2022, as limitations on irrigation water persist. In contrast, the survey indicated that producers intend to plant nearly 25 percent more ELS cotton in 2022, likely due to high prices. USDA’s first survey of producer planting intentions—*Prospective Plantings*—will be conducted in early March and published on March 31, 2022.

For the purposes of this analysis, 2022 cotton plantings of 12.7 million acres (+13 percent) are estimated to result in harvested acreage of 10.2 million acres, about 2 percent above 2021. The projected national abandonment rate of approximately 20 percent is based on regional long-run averages, except for the Southwest, where 2022 abandonment is projected at 30 percent. Southwest abandonment rates are highly variable and conditions there later this spring will have a considerable impact on acreage planted and the U.S. crop size. The latest NOAA seasonal outlook for the Southwest indicates that drought is forecast to remain or develop over the region’s cotton growing area at least through May.

USDA is forecasting a national average yield—based on regional average yields—of 856 pounds

per harvested acre, up from the 2021 yield of 849 pounds. The 2022 U.S. cotton crop is projected at 18.2 million bales, as a slightly larger harvested area and the highest yield in 4 years is expected to boost production 3 percent (approximately 575,000 bales) above 2021. Similar crops to 2021 are anticipated for most of the Cotton Belt regions, except for the Delta, where 2022 cotton production could rise to its highest in 3 years. Based on higher U.S. carry-in stocks of 3.5 million bales for 2022/23 and larger production, the total supply—21.7 million bales—would increase modestly but would remain the second lowest level in 5 years.

U.S. Disappearance, Ending Stocks, and Farm Price

**U.S. Cotton Supply and Demand 2021/22 and 2022/23  
est.**

<b>Attribute</b>	<b>Unit</b>	<b>2021/22</b>	<b>2022/23</b>	<b>Change (%)</b>
<b>Beginning Stocks</b>	<b>mil. bales</b>	<b>3.2</b>	<b>3.5</b>	<b>11.1</b>
<b>Area Harvested</b>	<b>mil. HA</b>	<b>4.0</b>	<b>4.1</b>	<b>2.3</b>
<b>Production</b>	<b>mil. bales</b>	<b>17.6</b>	<b>18.2</b>	<b>3.3</b>
<b>Imports</b>	<b>"</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<b>Total Supply</b>	<b>"</b>	<b>20.8</b>	<b>21.7</b>	<b>4.5</b>
<b>Exports</b>	<b>"</b>	<b>14.8</b>	<b>15.5</b>	<b>5.1</b>
<b>Use</b>	<b>"</b>	<b>2.6</b>	<b>2.7</b>	<b>3.9</b>
<b>Total Use</b>	<b>"</b>	<b>17.3</b>	<b>18.2</b>	<b>4.9</b>
<b>Ending Stocks</b>	<b>"</b>	<b>3.5</b>	<b>3.6</b>	<b>2.9</b>
<b>Stock to Use %</b>	<b>%</b>	<b>20.2</b>	<b>19.9</b>	<b>-1.7</b>
<b>Farm Price</b>	<b>cents/lb.</b>	<b>90.0</b>	<b>80.0</b>	<b>-11.1</b>

U.S. cotton mill use is projected at 2.65 million bales in 2022/23, 100,000 bales above 2021/22. U.S. mill use is expected to grow at a faster pace than the world and many of the leading cotton spinning countries in 2022/23. Further investment in textile operations in the United States to help alleviate logistical issues occurring in 2021/22 supports the increase. In addition, a continued strong domestic demand and an expected push to pre-pandemic exports of semi-processed textile and apparel products for finishing and shipping back to U.S. consumers is projected.

Exports are projected to rise 5 percent in 2022/23 to 15.5 million bales, as the United States maintains a 32 percent share of world trade. With world cotton mill use expected to expand in 2022/23, global trade is projected to increase to a near record, and many of the major producing/exporting countries will likely benefit. In addition, anticipated U.S. logistical

improvements—along with a larger crop projection—are expected to position the United States as the world’s leading cotton exporter once again in 2022/23.

U.S. cotton ending stocks are projected marginally higher in 2022/23 but less than half the 2019/20 stock level. At 3.6 million bales, ending stocks in 2022/23 are expected only 100,000 bales above the year before. On the other hand, foreign stocks—including stocks in China—are projected to decline modestly in 2022/23, helping to support farm prices once again, albeit below the elevated levels seen in 2021/22 related to the pandemic and logistical issues around the world. For 2022/23, the average price received by producers is expected at 80 cents per pound, compared with the 2021/22 current forecast of 90 cents.

## Appendix: China Cotton Policy and USDA Assumptions

### Import Policy: Sliding Scale Quota Issued Starting in 2018: Calendar Year

#### 2018

- Out-of-quota import duty is 40% ad valorem.
- 894,000 metric tons (MT) TRQ at 1% duty; calendar year basis, one-third reserved for State Enterprises.
- Sliding scale import licenses, 800,000 MT issued; valid Sept/18-Feb/19, but licenses were not fully used.
- Imports of U.S. cotton faced additional 25% duty starting in June; some imports by State Enterprises and for processing exempt from additional duties.
- Imports of foreign cotton by State Reserve.

#### 2019

- Out-of-quota duty, TRQ, and duty-free processing imports same as previous year.
- Imports of U.S. cotton face additional 25% duty; some imports by State Enterprises and for processing exempt from additional duties.
- Imports of foreign cotton by State Reserve, but U.S. imports excluded.
- Additional access provided; additional Sliding Scale quota of 800,000 tons issued, but licenses were not fully used.

#### 2020

- Out-of-quota duty, TRQ, and duty-free processing imports same as previous year.
- Imports of U.S. cotton face additional 25% duty; some imports by State Enterprises and for processing exempt from additional duties. On Feb. 17, 2020 China announced procedures for other importers to apply for exemptions from the additional duties.
- Imports of foreign cotton by State Reserve.
- Additional access provided; 400,000 MT issued September.

#### 2021

- Out-of-quota duty, TRQ, and duty-free processing imports same as previous year. Updated Sliding Scale duty formula lowered expected duty payments around 2 percent.
- Imports of U.S. cotton face additional 25% duty; some imports by State Enterprises and for processing exempt from additional duties.
- Unknown level of imports of foreign cotton by State Reserve.
- Additional access provided, with additional Sliding Scale.

#### 2022

- Out-of-quota duty, TRQ, and duty-free processing imports same as previous year.

- Imports of U.S. cotton face additional 25% duty; some imports by State Enterprises and for processing exempt from additional duties.
- Limited imports of foreign cotton by State Reserve.
- Additional access provided; additional Sliding Scale expected to be issued.

### **State Reserve Policy: Calendar Year**

#### 2018

- Sales from March 12 thru September 30, 2018.
- Daily offers of 30,000 MT, 2.49 million MT sold, 58 percent of total amount offered.
- Offer price based on weekly average of internal price and A Index (same as 2016 and 2017).
- Purchased 100,000-120,000 MT foreign cotton.

#### 2019

- Sales from May 5 thru September 30, 2019.
- Daily offers of 30,000 MT, 998,500 MT sold, 91 percent of total amount offered.
- Offer price based on weekly average of internal price and A Index (same as 2016, 2017, and 2018).
- Purchased 200,000 MT foreign and 35,000 MT domestic cotton.

#### 2020

- Sales of 2012 and 2013 stocks.
- Purchased 930,000 MT foreign and 330,000 MT domestic cotton
- Daily offers of 30,000 MT, 504,000 MT sold.
- Stock level at end of year roughly equal to that at beginning of 2018.

#### 2021

- Sales of 2012 and 2013 stocks.
- Sales of 1.2 million MT, 97percent domestic.
- No purchases of domestic cotton.
- Approximately 425,000 MT imported cotton acquired.
- Stock level at end of year roughly equal to that at beginning of MY 2019/20.

### **Domestic Support Policy: Oct/Sept Marketing Year.**

#### 2016/17 - 2019/20

- Target price of 18,600 renminbi (RMB)/MT for Xinjiang.
- Xinjiang subsidy level based on difference between target price and average price received by gins during ginning period.

- For inland farmers, subsidy equals lesser of 2,000 RMB/MT or 60 percent of Xinjiang target price payments in given year.
- Further shift to payments being linked to production rather than area. Xinjiang yearly (2017-19) volume entitled for subsidy capped at 85 percent of 2012-14 average China cotton production. Some regions in Xinjiang have set ceilings on seedcotton yield that can be attributed to individual farmers, limiting ability of production from unregistered land to receive subsidy payments.
- Subsidy for long staple cotton at 1.3 times base rate.

#### 2020/21-2012/22

- Xinjiang subsidy carried forward with same target price.
- Cotton subsidy to farmers in inland provinces eliminated.

#### 2022/23

- No formal announcement yet, no major changes expected.

#### **Other Support for Cotton**

- High quality planting seeds subsidy.
- Xinjiang transport subsidy: Subsidies are provided to transport cotton lint and cotton containing yarn from Xinjiang to other regions.
- Government support for spinning in Xinjiang: Government provides direct support for spinning and for investment in spinning capacity in Xinjiang.