



Cotton and Wool Outlook

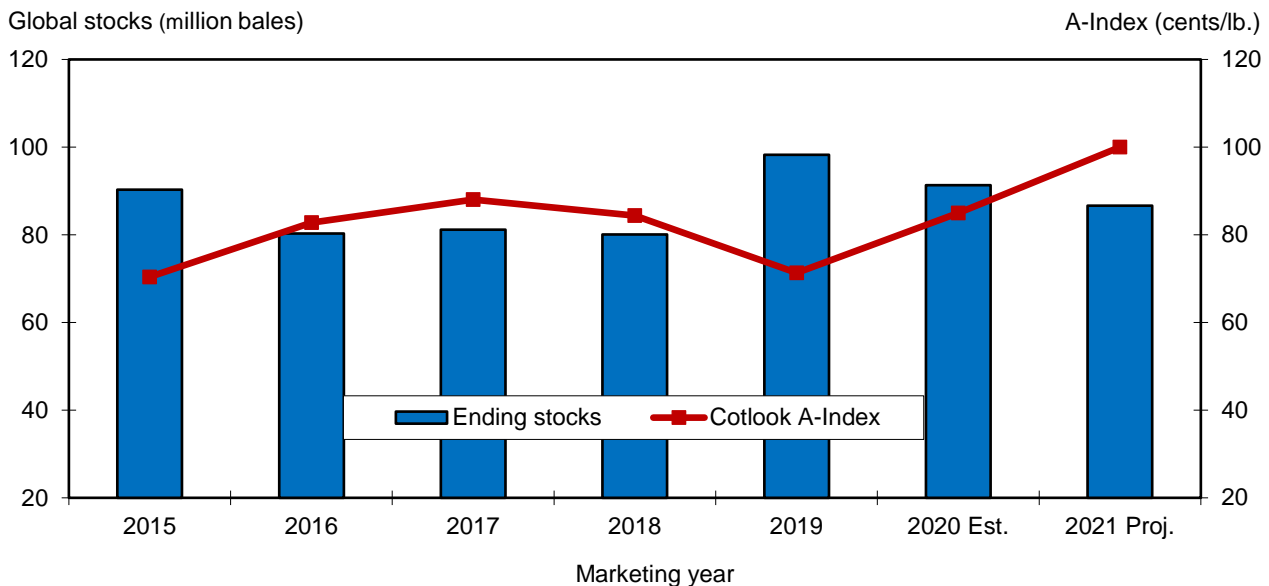
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China Leads World 2021/22 Cotton Stock Decline

The latest U.S. Department of Agriculture (USDA) cotton estimates for 2021/22 (August-July) indicate that global ending stocks are projected at 86.7 million bales, 5 percent (4.6 million bales) below 2020/21 (figure 1). This season’s stock decrease is largely attributable to declining supplies in China—where stocks are projected to fall by 4.3 million bales. Stocks are forecast at their lowest in 3 years, as world cotton mill use exceeds production for the second consecutive year in 2021/22. As a result, 2021/22 world cotton prices are expected to rise to their highest in a decade.

Global cotton production is projected at 119.6 million bales in 2021/22, 7.2 million bales above the year before. World cotton mill use is forecast at 124.1 million bales in 2021/22, 4.5 million bales higher than 2020/21 and the second highest on record. Meanwhile, global cotton trade is projected to remain at one of its highest levels on record in support of world mill use. Global exports are forecast at 46.8 million bales in 2021/22, with the United States accounting for one-third of the total.

Figure 1
Global cotton stocks and prices



Note: 1 bale = 480 pounds.

Sources: Cotlook and USDA, Interagency Commodity Estimates Committee.

Domestic Outlook

U.S. 2021 Cotton Crop Forecast Higher in September

USDA's September *Crop Production* report forecasts 2021 U.S. cotton production at 18.5 million bales, 1.2 million above the August estimate and 3.9 million bales above the 2020 crop. The larger September forecast is attributable to a higher national yield projection which more than offset a lower area estimate. If realized, the 2021 U.S. cotton crop would be the third highest of the last decade.

U.S. cotton planted area for 2021 was reduced 4.5 percent in September based on acreage reported to USDA's Farm Service Agency (FSA). Planted acreage is estimated at 11.2 million acres by USDA's National Agricultural Statistics Service (NASS), while harvested area is projected at 9.9 million acres, 4 percent below the August forecast. As a result, 2021 abandonment is projected at 11 percent, compared with approximately 31.5 percent in 2020. The national yield is forecast at 895 pounds per harvested acre this season, the second highest behind only 2017/18's record of 905 pounds. For current production estimates by State, see table 10 published separately with this report.

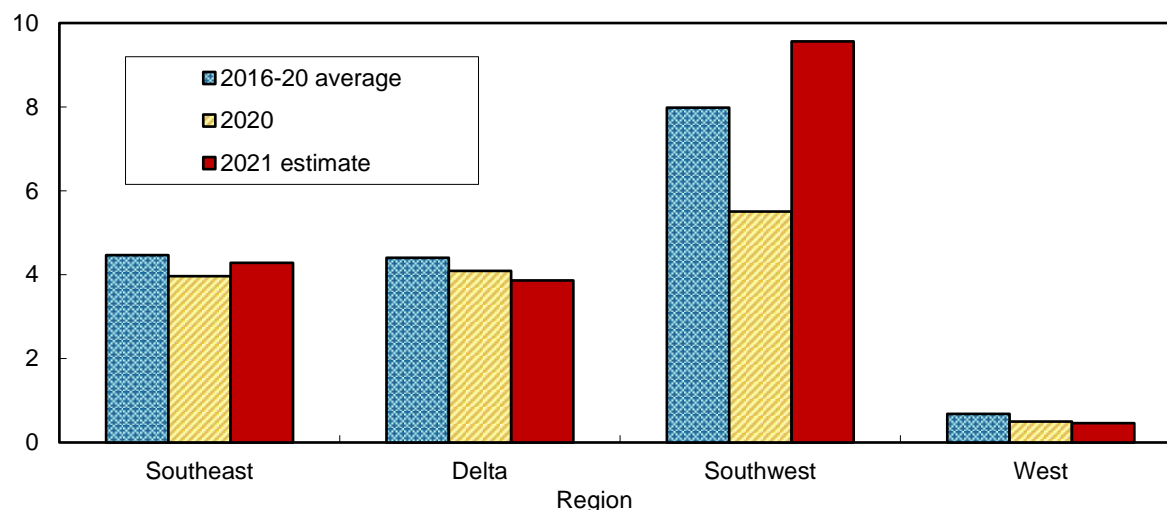
Upland cotton production in 2021 is forecast at nearly 18.2 million bales, 29 percent (4.1 million bales) above 2020 and above the 5-year average of 17.5 million bales. During the past 20 years, the September upland production forecast was above the final estimate 11 times and below it 9 times. Past differences between the September forecast and the final production estimates indicate a 2 out of 3 chance for the 2021 upland crop to range between 16.8 million and 19.5 million bales.

Compared with last season, 2021 upland production is expected to increase in two of the four Cotton Belt regions (figure 2). For the Southwest, upland production is forecast at nearly 9.6 million bales—more than 4 million bales above 2020—compared with a 5-year average of 8

Figure 2

U.S. regional upland cotton production

Million bales



Note: 1 bale = 480 pounds.

Source: USDA, National Agricultural Statistics Service, *Crop Production* reports.

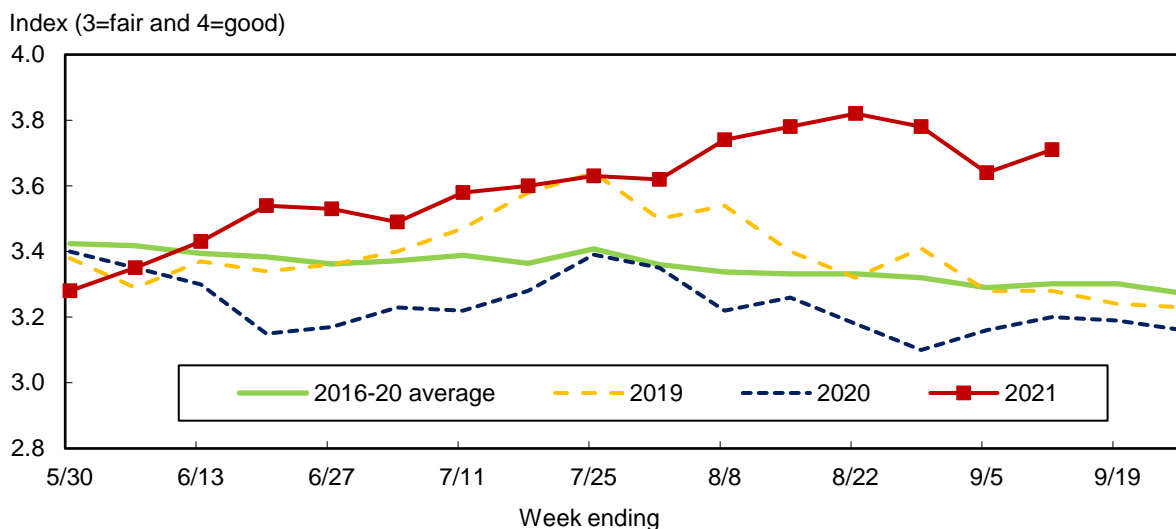
million bales. Despite the lowest planted area in 5 years, favorable growing conditions in 2021 reduced abandonment expectations this season to 17 percent, compared with last season's 49 percent and the 5-year average of 29 percent. In addition, the Southwest yield is forecast at 796 pounds per harvested acre in 2021, the third highest on record.

In the Southeast, 2021 cotton production is forecast at nearly 4.3 million bales, 8 percent above 2020. The higher production is attributable to an above-average yield, as harvested area—forecast at 2.3 million acres—is similar to 2020. The 2021 Southeast yield is forecast at 903 pounds per harvested acre, the fourth highest on record. In the Delta, 2021 cotton production is expected to approach 3.9 million bales, the lowest in 5 years. Although a record yield of 1,169 pounds per harvested acre is projected for the Delta this season, the lowest area since 2016 is anticipated to keep production below the 5-year average (4.4 million bales).

In the West, the 2021 upland crop is projected at 464,000 bales, compared with 499,000 bales in 2020. Planted area is estimated at 181,000 acres, the lowest since 2015. Meanwhile, a yield expectation of 1,295 pounds per harvested acre—compared with a 5-year average of 1,351 pounds—is likely to keep the West's upland crop at its lowest in over 80 years. In addition, the extra-long staple (ELS) cotton crop—primarily grown in the West—is projected at only 335,000 bales in 2021, down from 547,000 bales in 2020 and the lowest crop since 1988. ELS area is expected to decline for the fourth consecutive year in 2021, while yield is projected at its lowest since 2010.

U.S. cotton crop development in September is running behind both last season and the 5-year average. As of September 12, 36 percent of the cotton area had bolls opening, compared with 46 percent in 2020 and 43 percent for the 2016-20 average. Texas and Georgia—the largest producers—had bolls opening on 33 and 43 percent of their respective area, compared with 5-year averages of 35 and 57 percent. In contrast, Mississippi had bolls opening on 59 percent of its area, equal to the 2016-20 average. Although this season's U.S. cotton crop is relatively late, recent crop conditions are considerably better than the last several seasons (figure 3). In fact, 2021 U.S. cotton crop conditions are the best since 2017 when the national yield reached a record. As of September 12, 64 percent of the cotton area was rated “good” or “excellent,” compared with 45 percent last year, while 6 percent was rated “poor” or “very poor,” compared with 27 percent a year ago.

Figure 3
U.S. cotton crop conditions



Source: USDA, *Crop Progress* reports.

U.S. Cotton Demand and Stocks Increased in September

The estimate for U.S. cotton demand for 2021/22 was raised 500,000 bales (nearly 3 percent) in September to 18 million bales, with U.S. exports accounting for the increase. U.S. cotton exports are projected at 15.5 million bales in 2021/22, 5 percent below the year before but similar to 2019/20 (figure 4). Lower world trade prospects this season are expected to limit U.S. cotton shipments in 2021/22. However, as a share of global trade, 2021/22 U.S. cotton exports are projected only slightly below the year before at 33 percent. U.S. mill use remains forecast at 2.5 million bales in 2021/22, 150,000 bales above 2020/21 and the highest in 3 years.

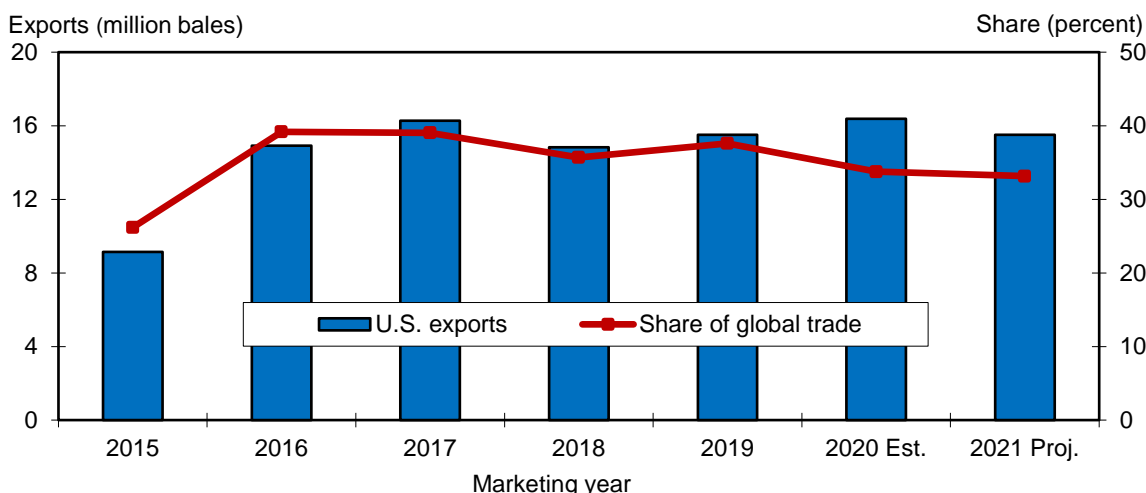
With the rise in cotton production more than offsetting the demand increase this month, the U.S. ending stocks estimate for 2021/22 is now forecast higher at 3.7 million bales. This is 17 percent above the final estimate for 2020/21, which was the lowest in 4 years. The stocks-to-use ratio is expected to reach 21 percent in 2021/22, up from the year before but slightly below the 5-year average of 24 percent. Although U.S. cotton stocks and the stocks-to-use ratio are forecast to rise, global cotton demand remains strong and continues to support prices. The 2021/22 upland cotton farm price is forecast at 84 cents per pound, up from an estimated 66.5 cents per pound in 2020/21 and the highest price since 2011/12. The final 2020/21 upland farm price estimate will be released by NASS at the end of September.

Revisions to 2020/21 U.S. Cotton Demand and Stocks

Estimates for U.S. cotton demand and stocks were revised in September with the release of complete marketing year data for 2020/21. Data from USDA's FSA and NASS indicated that U.S. cotton mill use in 2020/21 totaled 2.35 million bales, 200,000 bales above 2019/20. Likewise, U.S. cotton exports were above 2019/20 and reached nearly 16.4 million bales in 2020/21. The export estimate was obtained by averaging cotton shipments data reported by the U.S. Census Bureau and USDA's *U.S. Export Sales* reports when converted to 480-pound statistical bales; this procedure is consistent with the calculation used for the previous 3 seasons when considerable discrepancies also occurred. In addition, U.S. cotton stocks data collected and reported by FSA and NASS led to the computation of ending stocks for 2020/21, which are estimated at 3.15 million bales, compared with 7.25 million bales for 2019/20. For details on the calculation of U.S. cotton ending stocks, see the Highlight section in this report.

Figure 4

U.S. cotton exports and share of global trade



Note: 1 bale = 480 pounds.

Source: USDA, *World Agricultural Supply and Demand Estimates* reports.

International Outlook

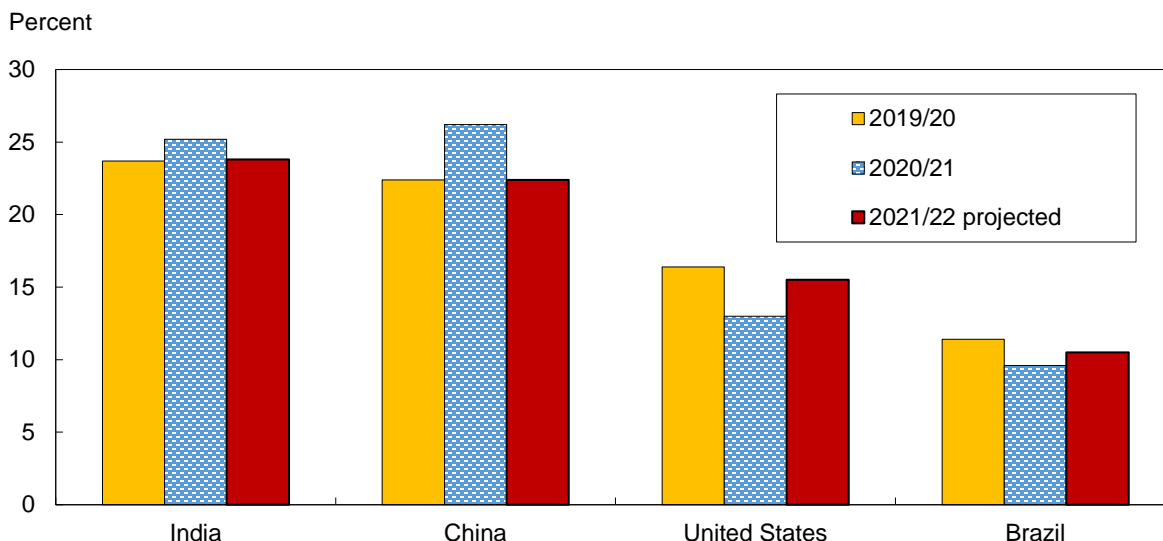
Global Cotton Production Forecast Higher in 2021/22

World cotton production is projected at 119.6 million bales this season, slightly above last month's projection but 7.2 million bales (nearly 6.5 percent) above 2020/21. With the exception of China, larger cotton crops are forecast for the major cotton-producing countries in 2021/22. World cotton harvested area in 2021/22 is forecast at approximately 32.9 million hectares (81.2 million acres), about 4.5 percent above 2020/21—with the United States accounting for nearly half of the increase. Meanwhile, the global cotton yield is forecast at 793 kilograms (kg) per hectare (707 pounds per acre) in 2021/22, about 3 percent below the previous 3-year average.

For India—the top producing country—2021/22 cotton area is projected at 12.7 million hectares, the lowest in 3 years, as the monsoon's variation affected cotton planting for some key regions this season. Although area is forecast 300,000 hectares lower in 2021/22, the national yield is projected at 489 kg per hectare, the highest since 2017/18. As a result, India's cotton crop is projected at 28.5 million bales in 2021/22, slightly above the year before. India is expected to account for 24 percent of the global cotton crop in 2021/22 (figure 5).

In China, 2021/22 cotton area is forecast about 4.5 percent lower at 3.1 million hectares, with cotton acreage concentrated in the high-yielding Xinjiang region. In addition, growing conditions appear to be less favorable when compared with the excellent conditions in 2020/21. As a result, the national yield is forecast below last season's record—1,976 kg per hectare—at 1,879 kg per hectare in 2021/22. China's 2021/22 cotton crop is projected at 26.75 million bales, compared with last season's 29.5 million bales. China is expected to contribute 22 percent of world cotton production in 2021/22.

Figure 5
Share of total cotton production by major producer



Source: USDA, *World Agricultural Supply and Demand Estimates* reports.

In addition to the larger U.S. crop (15.5 percent of global cotton production), 2021/22 cotton production is forecast higher in Brazil, Pakistan, and Australia. Brazil's production is projected at 12.5 million bales in 2021/22—10.5 percent of the world total—16 percent higher than 2020/21 but equal to the 3-year average. For Brazil, a rebound in area and yield is projected for 2021/22, as area reaches 1.5 million hectares and yield is forecast at a record 1,814 kg per hectare. For Pakistan—the fifth-largest producer—2021/22 cotton production is projected to rise 500,000 bales to 5 million bales, as a recovery in yield from a 3-decade low more than offsets lower area. Meanwhile, Australia's cotton crop is forecast to increase significantly (+68 percent) in 2021/22 as the easing of drought conditions supports higher area. Australia's cotton area (475,000 hectares) is expected to more than double this season to its highest in 5 years. Similarly, Australian production (4.7 million bales) is projected at its highest in 4 years.

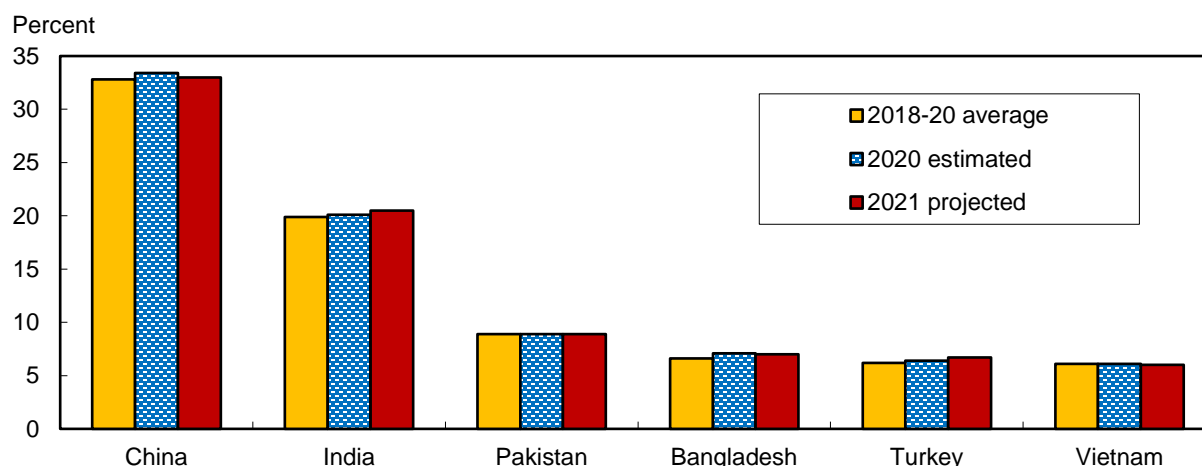
World Cotton Mill Use Forecast Higher in 2021/22

Global cotton mill use in 2021/22 is forecast at 124.1 million bales, 4.5 million bales (3.8 percent) above 2020/21 and near the 2006/07 record when 124.2 million bales were used. The projected rise in cotton mill use in 2021/22 is supported by the global economy's recovery from the coronavirus (COVID-19) pandemic as consumer demand for cotton products improves. Cotton mill use is forecast to increase for each of the major cotton-spinning countries in 2021/22 despite relatively high cotton prices compared with recent years.

For the top six cotton-spinning countries—China, India, Pakistan, Bangladesh, Turkey, and Vietnam—mill use is forecast to account for a combined 82 percent of the world total in 2021/22, similar to last season but above the 3-year average of 80.5 percent. For China, cotton mill use is projected at 41 million bales in 2021/22, 1 million bales (2.5 percent) above 2020/21 and the highest since a similar amount was used in 2017/18. China is the leading cotton spinner by far, accounting for one-third of global cotton mill use (figure 6). India's use is forecast at a record 25.5 million bales—20.5 percent of the world total—in 2021/22, 1.5 million bales (6 percent) above the year before. For Pakistan, 2021/22 cotton mill use is projected to rise 400,000 bales to 11 million bales, the highest since 2008/09, and contribute 9 percent of the global total. Furthermore, record cotton mill use is projected for Bangladesh, Turkey, and Vietnam, with use forecast at 8.7 million bales (7 percent of the world total), 8.3 million bales (6.7 percent), and 7.5 million bales (6 percent), respectively.

Figure 6

Share of total cotton consumption by major spinner



Source: USDA, *World Agricultural Supply and Demand Estimates* reports.

Global Cotton Trade and Stocks Decline

World cotton trade is forecast at nearly 46.8 million bales in 2021/22, 1.7 million bales below last season but still the second highest on record. Export reductions are forecast mainly for the United States and Brazil, which are partially offset by an increase for Australia. While U.S. cotton exports are forecast to decline 5 percent to 15.5 million bales in 2021/22, Brazil's exports are projected at 8.2 million bales, 2.8 million bales below 2020/21's record. Australia's exports, on the other hand, are forecast to rise 2 million bales to 3.6 million bales in 2021/22.

Lower imports are expected this season by China, Bangladesh, and Turkey despite the projected increase in world cotton mill use in 2021/22. For China, imports are forecast at 10 million bales (-2.9 million bales) this season. Imports by Bangladesh are forecast at 8.2 million bales (-550,000 bales) while Turkey is expected to import 5.2 million bales (-125,000 bales) in 2021/22. Partially offsetting these decreases are higher cotton imports by Vietnam and Pakistan to help sustain their mill use growth; imports are forecast at 7.5 million bales and 5.9 million bales, respectively.

Based on the latest cotton supply and demand estimates, global cotton ending stocks for 2021/22 are projected at 86.7 million bales, 5 percent (4.6 million bales) below last season and the lowest in 3 years. While stocks in Brazil and the United States are forecast to increase in 2021/22, cotton stocks are expected to decline moderately in China (-4.3 million bales) and India (-2 million bales). China's ending stocks are forecast at 35 million bales, the lowest since 2011/12, while India's cotton stocks are projected at 13.8 million bales, the lowest in 3 years. Although declining, 2021/22 ending stocks in China and India continue to account for the largest portion of global stocks—40 percent and 16 percent, respectively. In addition, Brazil's share is forecast at 14 percent in 2021/22, while the United States accounts for 4 percent.

Highlight

The U.S. Cotton Ending Stocks Calculation for 2020/21

U.S. cotton supply, demand, and stocks estimates are updated monthly in USDA's *World Agricultural Supply and Demand Estimates (WASDE)* report. During most of the marketing year, the ending stocks estimate is a function of the cotton supply estimate for the season minus the cotton demand estimate; in addition—in most months—a nominal quantity is added or subtracted to allow ending stocks to round to the nearest 100,000 bales. However, once the season has ended, USDA's cotton Interagency Commodity Estimates Committee (ICEC) is tasked with finalizing ending stocks based on actual stock surveys and other relevant data.

Historically, the U.S. Department of Commerce, Bureau of the Census surveyed and reported end-of-season cotton stocks in three categories: stocks in public warehouses, stocks in consuming establishments, and stocks “elsewhere.” The elsewhere category was partially estimated, as it included cotton in private storage and cotton in transit. The Census report was used by the cotton ICEC as “official” stocks at the end of each season, with the difference between USDA's supply and demand estimate and the Census Bureau estimate placed in a residual “unaccounted” category in the *WASDE*.

However, the Census survey was eliminated in the fall of 2011, and the cotton ICEC had to rely on incomplete data to estimate U.S. cotton ending stocks for several seasons. Beginning in 2015, USDA's National Agricultural Statistics Service (NASS) assumed responsibility for reporting the previously unavailable data—extra-long staple (ELS) cotton stocks in consuming establishments and all cotton stocks in private storage at season's end.

Table A shows the components used to calculate the 2020/21 and 2019/20 U.S. cotton ending stocks estimate, with adjustments made to reflect the lag between the report dates and the end of the marketing year on July 31. Since the establishment of the NASS survey in 2015, reports now exist for all stock categories except for stocks in transit (including stocks at ports). This category is estimated by the cotton ICEC using the Foreign Agricultural Service's (FAS) *Export Sales* shipment data. In addition, the calculation includes a deduction for any reported ginnings of new crop cotton before the end of the marketing year.

Based on the available data, U.S. cotton stocks on July 31, 2021—the end of the 2020/21 marketing year—are computed to be 3.05 million running bales or 3.15 million statistical (480-pound) bales. The final U.S. stocks estimate is 4.1 million bales below the 2019/20 estimate of 7.25 million bales, as demand for U.S. cotton exceeded production in 2020/21. U.S. cotton ending stocks in 2020/21 are the smallest since 2016/17, with the stocks-to-use ratio of 17 percent also the lowest in 4 years.

Table A--U.S. Department of Agriculture's U.S. cotton ending stocks calculation, 2019/20 and 2020/21

Item	Units	2019/20	2020/21
Cotton stocks components:			
(a) Stocks held in public storage and compresses 1/	1,000 running bales	5,714	2,323
(b) Preseason ginnings 2/	1,000 running bales	4	0
(c) Upland cotton mill stocks 3/	1,000 running bales	107	107
(d) Extra-long staple (ELS) cotton mill stocks 4/	1,000 running bales	2	2
(e) Stocks held in private storage 4/	1,000 running bales	475	136
(f) Stocks subtotal (a minus b plus c, d, and e)	1,000 running bales	6,294	2,568
Further adjustments:			
(g) Stocks in transit and at ports 5/	1,000 running bales	755	483
(h) Estimated ending stocks (f plus g)	1,000 running bales	7,049	3,051
(i) Adjusted cotton ending stocks	1,000 480-lb bales	7,250	3,150

1/ Inventory data (adjusted to July 31) from the Farm Service Agency's (FSA) *Bales Made Available for Shipment (BMAS)* report.

2/ Data from the National Agricultural Statistics Service's (NASS) August 2021 *Cotton Ginnings* report.

3/ Data from FSA's *Economic Adjustment Assistance Program* report.

4/ Data from NASS's September 2021 *Cotton System Consumption and Stocks* report.

5/ Estimated based on Foreign Agricultural Service's *Export Sales* cotton shipment data early in the subsequent season.

Source: USDA, various reports.

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