



Cotton and Wool Outlook

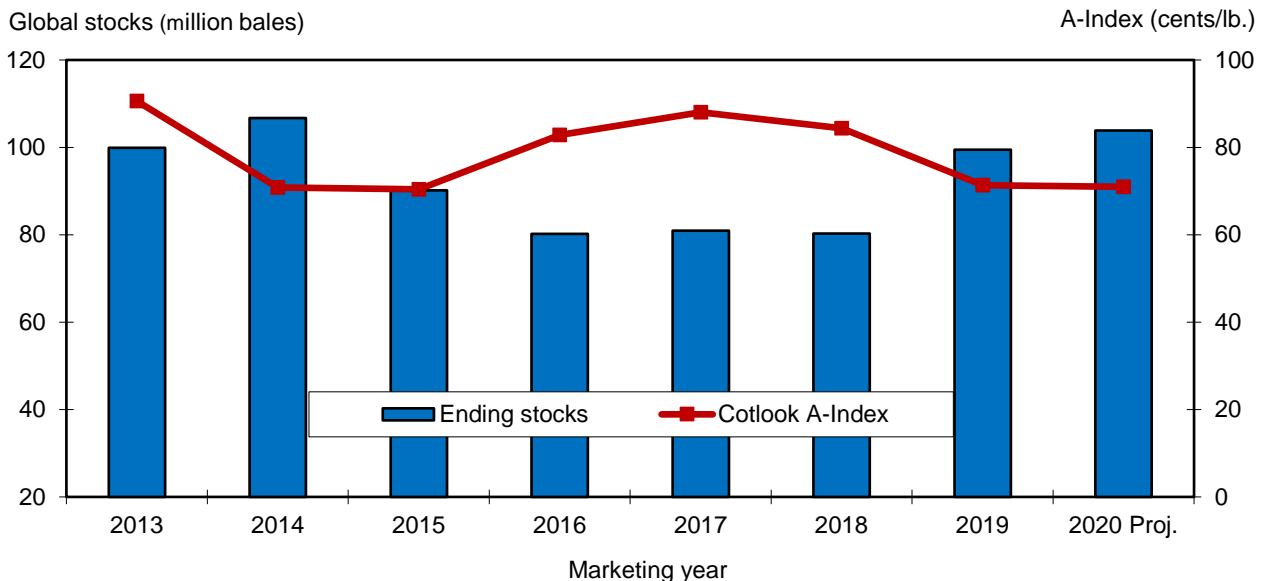
Leslie A. Meyer

Global 2020/21 Cotton Stock Increase Led by India

The latest U.S. Department of Agriculture (USDA) estimates indicate that global cotton ending stocks in 2020/21 are projected at 103.8 million bales, nearly 4.5 percent above 2019/20. Stocks are forecast at their second highest on record behind only 2014/15, as world cotton production exceeds mill use for the second consecutive year in 2020/21 (fig. 1). This season's stock increase is largely attributable to rising supplies in India—where stocks are projected to climb 20 percent. As a result, 2020/21 world cotton prices are expected to remain near last season's relatively low level.

World cotton production is forecast at a 4-year low (117.2 million bales) in 2020/21. Global cotton mill use is projected to rise 10 percent from a 16-year low to 112.7 million bales, as the world economy is expected to rebound in 2020/21. Meanwhile, global cotton trade is projected to increase slightly this season and help support the mill use growth. World exports are forecast at 41.7 million bales in 2020/21, the highest since 2012/13 and the third highest on record.

Figure 1
Global cotton stocks and prices



Note: 1 bale = 480 pounds.

Sources: Cotlook and USDA, Interagency Commodity Estimates Committee.

Domestic Outlook

U.S. 2020 Cotton Crop Forecast Lowered in September

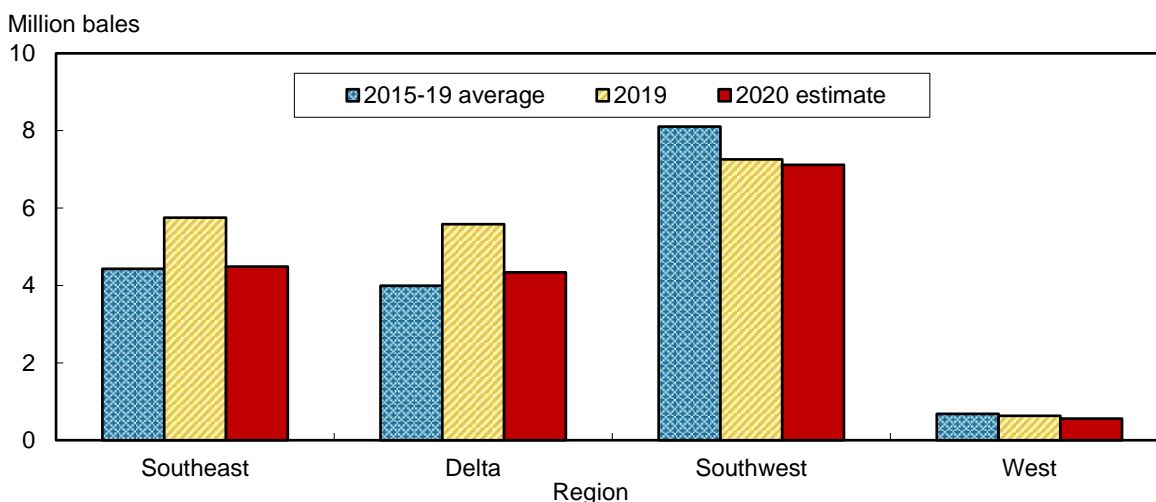
According to USDA's September *Crop Production* report, 2020 U.S. cotton production is forecast at nearly 17.1 million bales, 1 million below the August estimate and 2.8 million bales below the 2019 crop. The smaller September forecast is attributable to a lower area estimate and a reduced national yield projection. If realized, the 2020 U.S. cotton crop would be the smallest since 2015, when only 12.9 million bales were produced.

U.S. cotton planted area for 2020 was reduced slightly in September based on acreage reported to USDA's Farm Service Agency (FSA). Planted acreage was estimated at 12.1 million acres by USDA's National Agricultural Statistics Service (NASS), while harvested area was projected at 9.0 million acres, about 2.5 percent below the August forecast. As a result, 2020 abandonment is projected at approximately 25.5 percent, compared with 15.5 percent in 2019. The national yield is projected at a record 910 pounds per harvested acre this season, slightly above the 2017 level. For current production estimates by State, see table 10 published separately with this report.

The 2020 upland cotton crop is forecast at 16.5 million bales, 14 percent (2.7 million bales) below last season. 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 that chances are two out of three for the 2020 upland crop to range between 15.4 million and 17.6 million bales.

Compared with last season, 2020 upland production is projected to decline in each region of the Cotton Belt (fig. 2). For the Southwest, upland production is forecast at 7.1 million bales, slightly (2 percent) below last season and 1 million bales below the 5-year average. Lower planted area and higher abandonment expectations this season are projected to reduce the Southwest crop to its lowest since 2015. With limited rainfall throughout much of the growing season, 2020

Figure 2
U.S. regional upland cotton production



Note: 1 bale = 480 pounds.

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

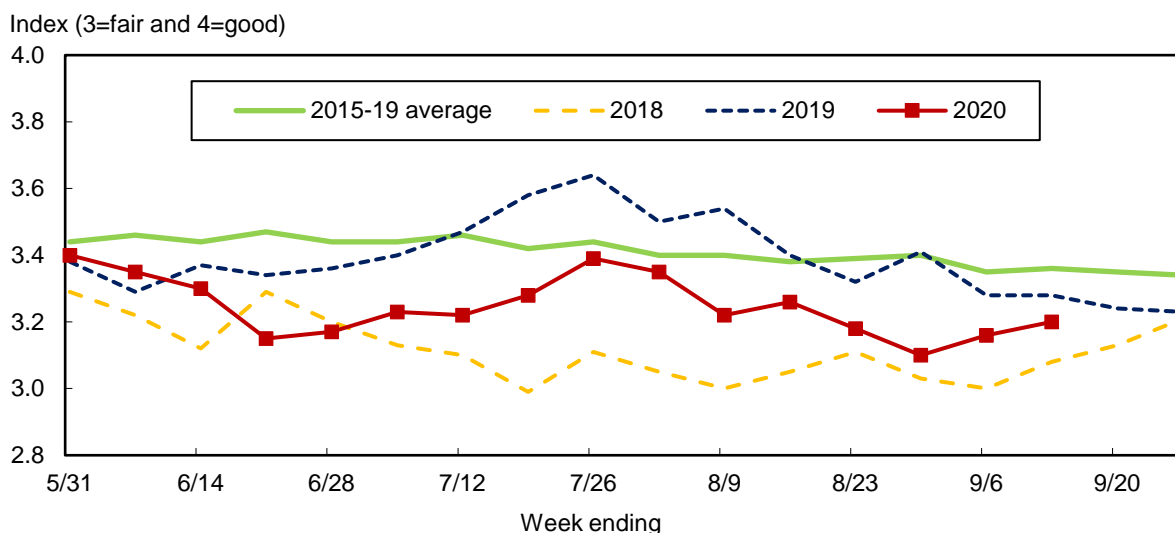
Southwest abandonment is projected to be considerably higher (40 percent), compared with last season's 25.5 percent and the 5-year average of 21 percent. With a larger percentage of the lower-yielding dryland area being abandoned this season, the 2020 Southwest yield is projected higher at 759 pounds per harvested acre, compared with last season's 594 pounds.

In the Southeast, 2020 cotton production is forecast at nearly 4.5 million bales, 22 percent below 2019. The lower production is based on reduced area—the lowest in 4 years—and a 2020 yield that is below last season but above the 5-year average. Southeast harvested area is estimated at 2.3 million acres this season, while the region's yield is projected at 921 pounds per harvested acre. In the Delta, 2020 cotton production is expected to be the lowest in 3 years at 4.3 million bales, as area there is 25 percent below 2019. However, an anticipated record yield of 1,176 pounds per harvested acre is expected to keep the Delta crop above the 5-year average.

In the West, the 2020 upland crop is expected to reach 560,000 bales, compared with 631,000 bales in 2019. Although the upland cotton area decreased this season, a rebound in yield to 1,358 pounds per harvested acre is expected, bringing yield closer to the 5-year average. In addition, the extra-long staple (ELS) crop—grown mainly in the West—is projected at 559,000 bales in 2020, down from 685,500 bales in 2019 and the lowest crop since 2015. ELS area is expected to decrease for the third consecutive season in 2020.

U.S. cotton crop development in September is running behind last season but ahead of the 5-year average. As of September 13, 47 percent of the cotton crop had bolls opening, compared with 51 percent in 2019 and 45 percent for the 2015-19 average. Of note, South Carolina had bolls opening on only 20 percent of its area (compared with 67 percent in 2019), and Georgia had bolls opening on 52 percent of its area (compared with 67 percent last year). In contrast, Arizona had bolls opening on 96 percent of its area (compared with 84 percent in 2019). Meanwhile, 2020 U.S. cotton crop conditions have continued below last season and the 5-year average (fig. 3). As of September 13, 45 percent of the cotton area was rated “good” or “excellent,” compared with 41 percent last year, while 27 percent was rated “poor” or “very poor,” compared with 17 percent a year ago. Dry conditions, particularly in parts of the Southwest, have kept this season's overall crop conditions below average.

Figure 3
U.S. cotton crop conditions



Source: USDA, *Crop Progress* reports.

U.S. Cotton Demand and Stocks Reduced in September

The estimate for U.S. cotton demand for 2020/21 was reduced 3 percent (600,000 bales) in September to 17.1 million bales—the lowest in 5 years—with both mill use and exports lowered this month. U.S. mill use for 2020/21 is forecast at 2.5 million bales, 16 percent above 2019/20, which was significantly affected by COVID-19. U.S. cotton exports, meanwhile, are projected at 14.6 million bales in 2020/21, 900,000 bales below last season and the lowest since 2015/16. Competitively priced foreign supplies are expected to limit U.S. cotton shipments in 2020/21. As a share of global trade, U.S. cotton exports are projected at 35 percent this season, compared with 38 percent in 2019/20 and 36 percent in 2018/19.

With the cotton production decline more than offsetting the demand decrease, the September U.S. ending stocks estimate for 2020/21 is lower than a month earlier, forecast at 7.2 million bales. This is slightly below the final 2019/20 estimate of 7.25 million bales, which was the highest in 12 years. The stocks-to-use ratio is expected to rise slightly, however, to 42 percent by the end of 2020/21, also the largest since 2007/08. Based on these supply and demand estimates, the 2020/21 upland cotton farm price is forecast at 59 cents per pound, marginally below the 2019/20 estimate. The final 2019/20 upland farm price estimate will be released at the end of October.

Revisions to 2019/20 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 2019/20. Data from USDA's FSA and NASS indicated that U.S. cotton mill use in 2019/20 totaled 2.15 million bales, 825,000 bales below 2018/19. U.S. cotton exports, on the other hand, reached 15.5 million bales, 690,000 bales above 2018/19. 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 2 seasons when considerable discrepancies also occurred. For more details about those export estimate adjustments, see the September 2019 *Cotton and Wool Outlook* report on the ERS website.

In addition, cotton stocks data collected and reported by FSA and NASS led to the computation of U.S. cotton ending stocks for 2019/20, which are estimated at 7.25 million bales, compared with 4.85 million bales estimated for 2018/19. For details on the calculation of U.S. cotton ending stocks, see the Highlight section in this report.

Cotton Product Imports Recovering from COVID-19 Impact

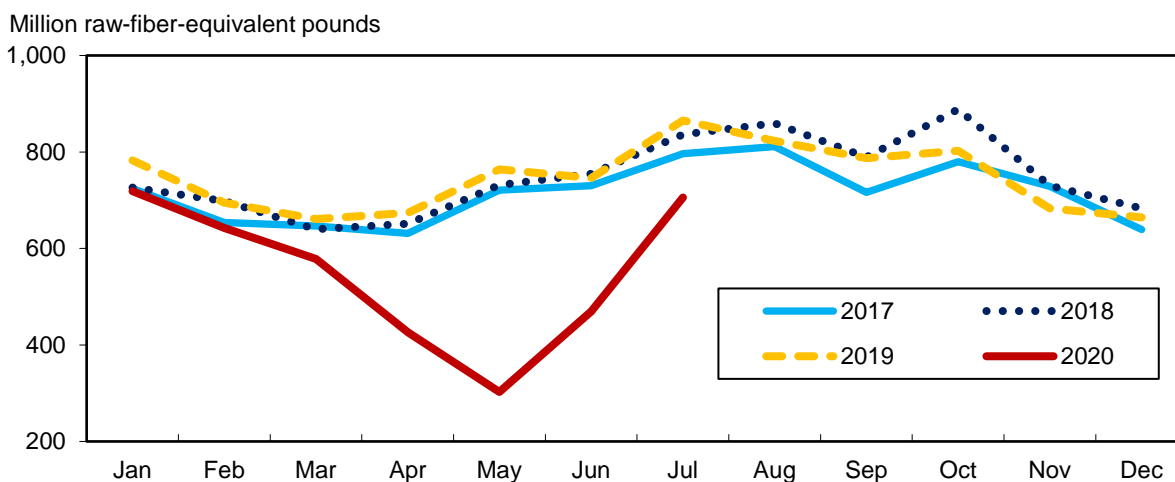
Total U.S. cotton textile and apparel trade declined considerably during the first half of 2020, compared with the corresponding 2019 period, but is expected to improve during the second half of the year. U.S. cotton product imports—which are mostly clothing products—generally follow a seasonal pattern, with increased imports seen in the months prior to peak consumer buying periods—summer, back-to-school, and Christmas.

As calendar year 2020 began, U.S. cotton product imports recorded similar monthly levels as during the previous 3 years. However, as the COVID-19 pandemic unfolded, dramatic reductions in the textile and apparel industry produced ripple effects throughout the supply chain from manufacturing to retail sales, which affected product imports significantly during the spring and summer of 2020 (fig. 4). U.S. cotton product imports began deviating from their seasonal pattern in March 2020. As the impacts of COVID-19 progressed, dramatic import declines

ensued in April and May, as manufacturing reductions, supply chain disruptions, and retail closures led to declines in consumer purchases of items such as clothing.

Conversely, cotton product import data since May have been relatively positive, as the recovery of the textile and apparel industry progresses. May 2020 cotton product imports were only about 40 percent of the 2017-19 average for that month. However, by July—the latest available data—imports had climbed to 85 percent of its 2017-19 average. Although the economic recovery is expected to vary by industry, recent cotton product imports—a proxy for the textile and apparel industry—show a substantial improvement and are supportive of the ongoing recovery.

Figure 4
U.S. cotton textile and apparel product imports



Sources: USDA, Economic Research Service and U.S. Department of Commerce, Bureau of the Census.

International Outlook

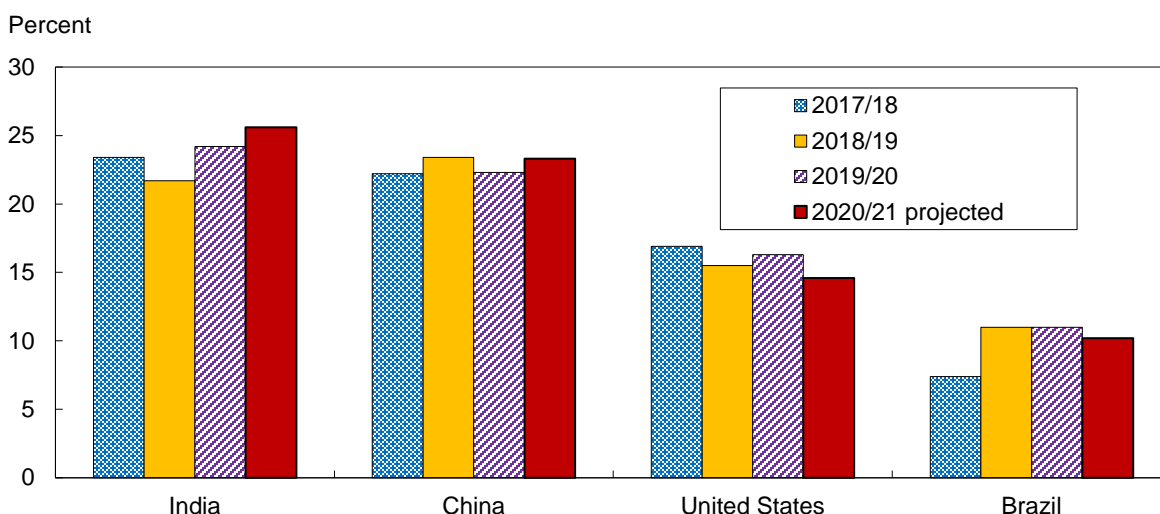
Lower World Cotton Production Forecast in 2020/21

Global cotton production in 2020/21 is projected at 117.2 million bales, slightly below last month's projection but 4 percent (4.8 million bales) below 2019/20. Although lower area is forecast to be harvested in 2020/21 for most major-producing countries, a rebound in the global yield is expected to moderate this season's production decrease. Global cotton harvested area is forecast at 32.9 million hectares (81.4 million acres), nearly 6 percent below 2019/20—with the United States accounting for half of the decline. Meanwhile, the global yield is forecast at 775 kilograms (kg) per hectare (691 pounds per acre), near the 3-year average.

For India—the top producing country—cotton area in 2020/21 is projected at a record 13.4 million hectares, as a lack of labor for rice planting in the North and Government policies in the South supported a national cotton area that is slightly above last season. In addition to more area, a marginally higher yield (487 kg per hectare) is expected to help increase the crop to 30.0 million bales in 2020/21—the second highest on record, behind only 2013/14. India is projected to account for more than 25 percent of the global cotton crop in 2020/21 (fig. 5).

In China, 2020/21 cotton area is forecast about 6 percent lower at 3.25 million hectares, with cotton acreage remaining concentrated in the high-yielding western region of Xinjiang. In addition, excellent growing conditions this season indicate a rising national yield of 1,826 kg per hectare, a record. With area and yield changes offsetting, China's production is forecast unchanged year over year at 27.25 million bales, or 23 percent of the global total in 2020/21. Similarly, cotton production in Pakistan is projected unchanged this season at 6.2 million bales, as a 10-percent reduction in area is offset by a rebound in yield to a modest 614 kg per hectare.

Figure 5
Share of total cotton production by major producer



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

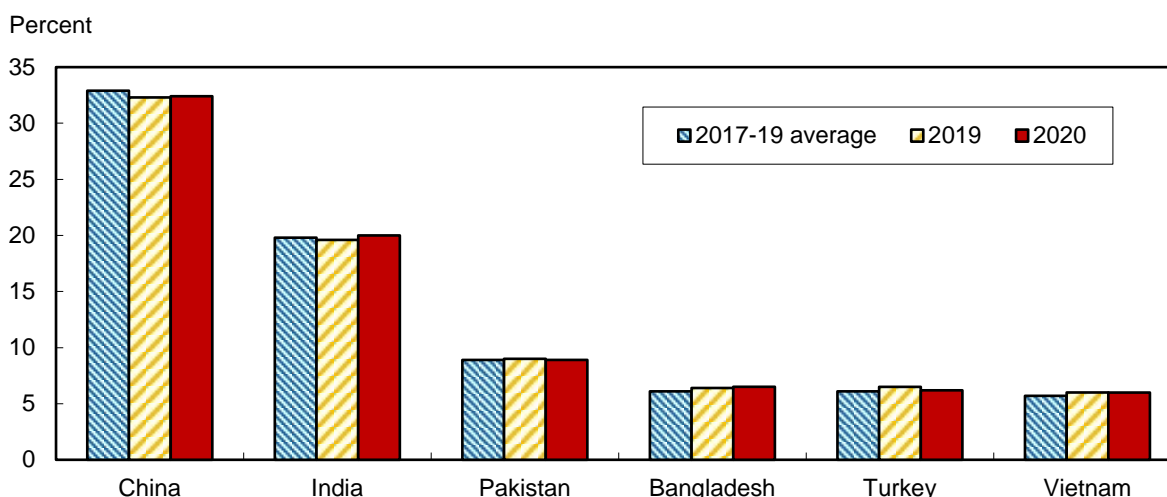
In contrast, production declines for the United States—where 15 percent of world production is expected in 2020/21—and Brazil—with 10 percent of the global crop—account for most of the global decrease in 2020/21. For Brazil, lower estimates for 2020/21 area and yield are projected to reduce cotton production from 2019/20’s record of 13.4 million bales. Brazil’s cotton production estimate for 2020/21 is 12.0 million bales (-10 percent), with a yield of 1,686 kg per hectare, below last season’s record of 1,747 kg per hectare. Meanwhile, Australia’s 2020/21 crop is forecast to increase significantly from last season’s drought-impacted crop. Australia’s area and production in 2020/21 are projected substantially higher at 300,000 hectares and 2.1 million bales, respectively.

World Cotton Mill Use Forecast To Increase in 2020/21

Global cotton consumption in 2020/21 is projected at 112.7 million bales, 10 percent above the 2019/20 estimate. World mill use decreased 15 percent in 2019/20—largely the result of the COVID-19 impact on the textile manufacturing industry—to the lowest level since 2003/04. However, a relatively strong global economic growth outlook for calendar year 2021 supports the expected mill use growth this season, with most countries’ cotton mill use forecast to increase in 2020/21.

For the top six cotton-spinning countries—China, India, Pakistan, Bangladesh, Turkey, and Vietnam—mill use is forecast to account for a combined 80 percent of the world total in 2020/21, similar to the past several years (fig. 6). For China, cotton mill use is projected at 36.5 million bales in 2020/21, up nearly 11 percent from 33.0 million bales last season. In 2020/21, China is expected to account for 32 percent of total global cotton consumption, down slightly from its 2017-19 average. India’s consumption is forecast to rise 12.5 percent to 22.5 million bales, or 20 percent of the world total. For Pakistan, cotton mill use is projected to expand nearly 9 percent to 10.0 million bales and account for 9 percent of the total in 2020/21, similar to the past 3 years. Cotton mill use in Bangladesh (7.3 million bales), Turkey (7.0 million bales), and Vietnam (6.8 million bales) is also projected higher for each country in 2020/21. As with the other major spinners, these countries’ share of global mill use is near the past several years.

Figure 6
Share of total cotton consumption by major spinner



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

Global Cotton Trade and Stocks To Rise in 2020/21

World cotton trade is forecast at 41.7 million bales in 2020/21, 1.0 million bales above last season and the highest since 2012/13's record of 46.4 million bales. This season's increase is largely attributable to Brazil and India, as a decrease for the United States partially offsets their gains. For Brazil, cotton exports are forecast to increase for the fourth consecutive year in 2020/21 to a record 9.2 million bales, as rising supplies increase export opportunities in a competitive global market. For India, cotton exports are projected to reach 5.0 million bales for the first time in 3 years. Like Brazil, India's supplies have been growing in recent years and are forecast at record levels.

China, Bangladesh, and Vietnam are projected as the leading raw cotton importers in 2020/21. For China, imports are forecast at 9.0 million bales (+1.9 million bales) this season. China is expected to increase its imports as the country adds foreign cotton to the national reserve for rotational purposes and for re-export in the form of textile and apparel products. Imports by Bangladesh are forecast at 7.3 million bales (+300,000 bales) in 2020/21, helping support the anticipated growth in mill use there. Likewise, Vietnam's 2020/21 cotton imports—forecast at 6.8 million bales (+320,000 bales)—help sustain its projected mill use growth.

Based on the latest cotton supply and demand estimates, global ending stocks are projected at 103.8 million bales in 2020/21, 4.4 million bales (nearly 4.5 percent) above the beginning level and the highest in 6 years. While stocks in a number of countries are projected to decrease in 2020/21, stocks are expected to rise considerably (+3.5 million bales) in India to a record 21.4 million bales—21 percent of the world total. Stocks in China are forecast to decrease 1 percent to 36.5 million bales, or 35 percent of the global total in 2020/21. Similarly, Brazil's cotton stocks are expected to decline 1 percent to 13.8 million bales, or 13 percent of all stocks this season. The global stocks-to-use ratio is estimated at 92 percent in 2020/21, slightly below last season's record of 97 percent. As a result, the 2020/21 Cotlook A-Index price is expected to decrease slightly from 2019/20's average of 71.3 cents per pound.

Highlight

Calculating U.S. Cotton Ending Stocks for 2019/20

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. Census Bureau 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 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 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, 2020—the end of the 2019/20 marketing year—are computed to be 7.05 million running bales or 7.25 million statistical (480-pound) bales. The final U.S. stocks estimate is 49 percent (2.4 million bales) above the 2018/19 estimate of 4.85 million bales, as U.S. production exceeded demand in 2019/20. U.S. cotton ending stocks are the highest since 2007/08, with the stocks-to-use ratio of 41 percent also the highest in 12 years.

Table A--U.S. Department of Agriculture's U.S. cotton ending stocks calculation, 2018/19 and 2019/20

Item	Units	2018/19	2019/20
Cotton stocks components:			
(a) Stocks held in public storage and compresses 1/	1,000 running bales	3,596	5,714
(b) Preseason ginnings 2/	1,000 running bales	4	4
(c) Upland cotton mill stocks 3/	1,000 running bales	125	107
(d) Extra-long staple (ELS) cotton mill stocks 4/	1,000 running bales	3	2
(e) Stocks held in private storage 4/	1,000 running bales	200	475
(f) Stocks subtotal (a minus b plus c, d, and e)	1,000 running bales	3,920	6,294
Further adjustments:			
(g) Stocks in transit and at ports 5/	1,000 running bales	777	755
(h) Estimated ending stocks (f plus g)	1,000 running bales	4,697	7,049
(i) Adjusted cotton ending stocks	1,000 480-lb bales	4,850	7,250

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 2020 *Cotton Ginnings* report.

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

4/ Data from NASS's September 2020 *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.

Last update: 09/15/20.

Suggested Citation

Meyer, Leslie A., *Cotton and Wool Outlook*, CWS-20i, U.S. Department of Agriculture, Economic Research Service, September 15, 2020.

Use of commercial and trade names does not imply approval or constitute endorsement by USDA.

In accordance with Federal civil rights law and USDA civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at How to File a Program Discrimination Complaint and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.