



Cotton and Wool Outlook

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Cotton and Wool Outlook monthly tables, in excel format, can be found on the Cotton and Wool Outlook report page on USDA’s Economic Research Service website.

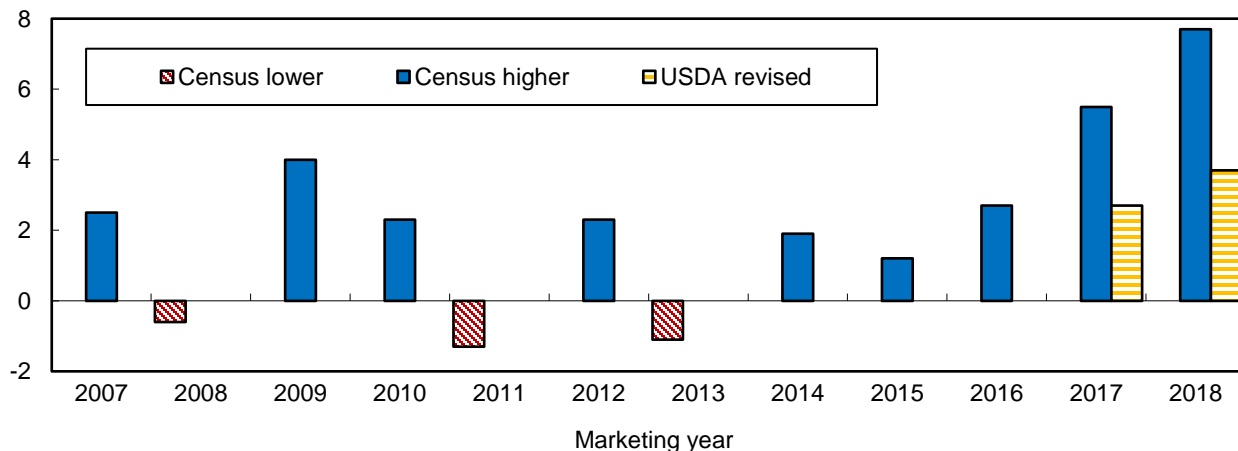
Historical U.S. Cotton Export Estimates Revised Up

U.S. cotton exports for the 2017/18 and 2018/19 marketing years were adjusted upward in September based on a reduced unaccounted estimate for each year that more closely reconciles reported cotton stocks with related supply and demand data. The unaccounted estimate has grown in recent years, indicating a cotton balance sheet discrepancy. The estimates for production, mill use, and stocks have maintained their consistency over this time, but a growing percentage difference has occurred between the cotton export sources—the U.S. Census Bureau and USDA’s *U.S. Export Sales* reports (fig. 1).

The variation between Census and USDA export data averaged 2 percent during 2007/08-2016/17. Beginning in 2017/18, the difference reached 5.5 percent and climbed to nearly 8 percent in 2018/19. As a result, these export estimates were further reviewed—given the reported stocks and implied unaccounted estimates—resulting in revised exports equal to the average reported by the two sources.

Figure 1
U.S. cotton export comparison: USDA vs. Census data

Percent difference



Sources: USDA, Foreign Agricultural Service, *U.S. Export Sales* reports and U.S. Department of Commerce, U.S. Census Bureau.

Domestic Outlook

U.S. 2019 Cotton Crop Forecast Reduced in September

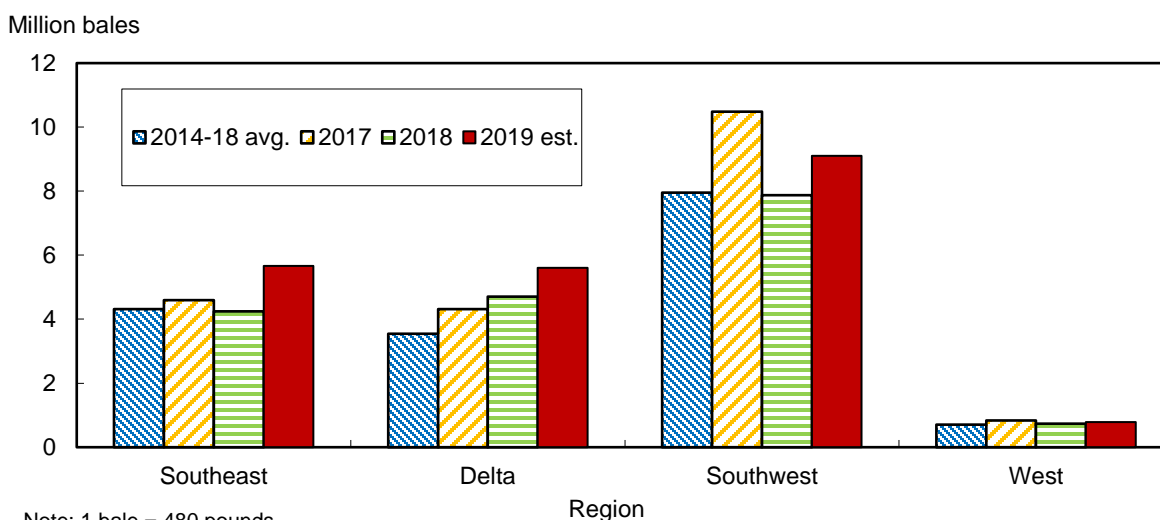
According to USDA's September *Crop Production* report, 2019 U.S. cotton production is forecast at nearly 21.9 million bales, 654,000 bales below the August estimate but still 3.5 million bales above the 2018 crop. The smaller September forecast is attributable to a reduced area estimate and a lower projected national yield. If realized, the 2019 U.S. cotton crop would remain the largest since 2005's record of 23.9 million bales.

U.S. cotton planted area for 2019 was lowered slightly (1 percent) in September based on acreage reported to USDA's Farm Service Agency (FSA). Planted area was estimated at nearly 13.8 million acres by USDA's National Agricultural Statistics Service (NASS), while harvested acreage was projected at 12.5 million acres, also down 1 percent from the August forecast. As a result, abandonment in 2019 is projected at 9 percent, compared with approximately 27.5 percent in 2018. The national yield is projected at 839 pounds per harvested acre this season, slightly below the 5-year average of 848 pounds. For current production estimates by State, see table 10 published separately with this report.

The 2019 U.S. upland cotton crop is forecast at 21.1 million bales, 20 percent (3.6 million bales) above last season. During the previous 20 years, the September upland cotton forecast was below the final estimate 9 times and above it 11 times. Past differences between the September forecast and the final upland estimate indicate that chances are 2 out of 3 that 2019 production will range between 19.8 million and 22.5 million bales.

Compared with last season, 2019 upland cotton production is forecast higher in each region of the Cotton Belt (fig. 2). For the Southwest, upland production is projected at 9.1 million bales, 1.2 million above last season but below the 2017 record of 10.5 million bales. Although 2019 planted area (7.9 million acres) is estimated below the previous year, below-average

Figure 2
U.S. regional upland cotton production



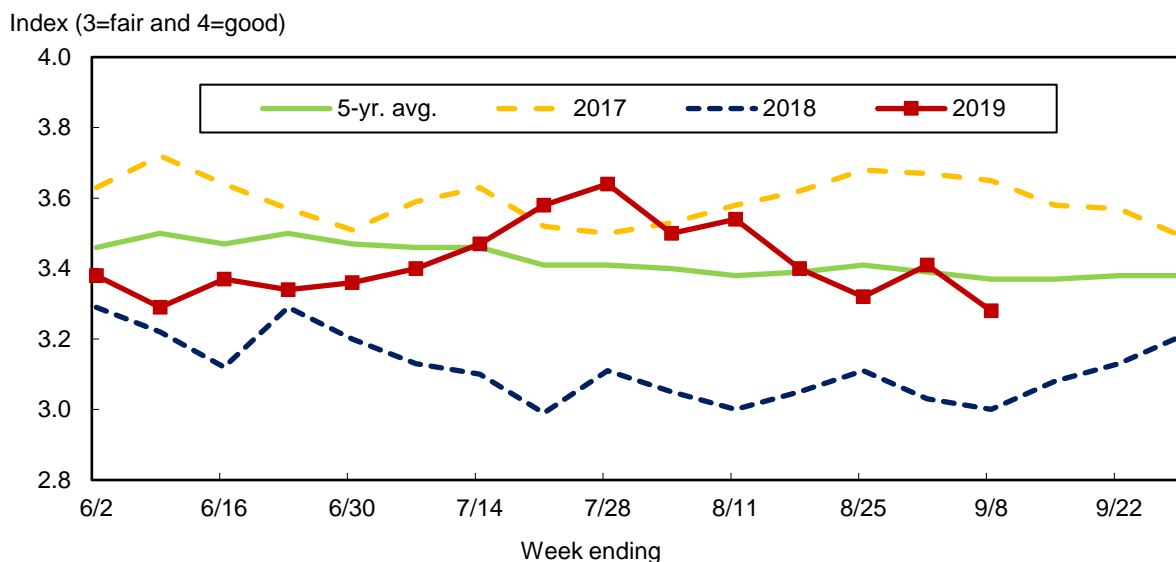
abandonment—projected at 14.5 percent in 2019—is expected to increase harvested acreage (6.7 million acres) to its highest level since 1981. The region’s yield is forecast at 649 pounds per harvested acre, below the last several seasons.

In the Southeast, 2019 cotton production is forecast at 5.7 million bales, one of the largest crops on record. The higher production is based on increased area—the highest since 2011—and expectations for the third highest yield on record. The region’s yield is forecast at 927 pounds per harvested acre, well above the 5-year average of 861 pounds. In the Delta, 2019 cotton production is expected to expand for the fourth consecutive season—reaching 5.6 million bales. With a yield of 1,140 pounds per harvested acre projected slightly below the 2018 record, the region is forecast to have its largest cotton crop since 2006.

In the West, the 2019 upland crop is expected to reach 785,000 bales, compared with 738,000 bales in 2018. Although the upland cotton area decreased slightly this season, an above-average yield of 1,460 pounds per harvested acre helped increase the level of production for 2019. In addition, the extra-long staple (ELS) crop—grown mainly in the West—is projected at 717,000 bales in 2019, down from 801,000 bales in 2018 but still the second largest crop since 2012. Area has shifted out of ELS production recently as stocks have risen and prices declined.

U.S. cotton crop development in early September is running ahead of last season and the 5-year average. As of September 8, 43 percent of the cotton crop had bolls opening, compared with last season’s 38 percent and the 2014-18 average of 37 percent. In addition, U.S. cotton crop conditions have continued above last season and are near the 5-year average (fig. 3). As of September 8, 43 percent of the 2019 area was rated “good” or “excellent,” compared with 38 percent a year ago, while 18 percent was rated “poor” or “very poor,” compared with 34 percent in 2018.

Figure 3
U.S. cotton crop conditions



Source: USDA, *Crop Progress* reports.

U.S. Cotton Demand Reduced in 2019/20; Stocks Unchanged

The estimate for U.S. cotton demand in 2019/20 decreased 4 percent in September to 19.5 million bales, 10 percent above 2018/19 but equal to 2017/18. Mill use for 2019/20 is forecast at 3.0 million bales, similar to last season. U.S. exports, however, are projected at 16.5 million bales for 2019/20; despite a 700,000-bale reduction this month, U.S. cotton exports are forecast at their second highest on record, behind only 2005/06. Despite larger supply expectations in 2019/20, reduced prospects for global mill demand—coupled with competitive supplies from other exporters—are likely to limit U.S. cotton export expansion this season. As a share of global trade, U.S. cotton exports are projected to rise slightly from 36 percent in 2018/19 to 38 percent this season.

With offsetting adjustments in supply and demand, the September U.S. 2019/20 ending stocks estimate remains forecast at 7.2 million bales, nearly 50 percent above last season and the highest since 2007/08. The stocks-to-use ratio is expected to climb to 37 percent by the end of 2019/20, the largest in over a decade. Based on these supply and demand estimates, the 2019/20 upland cotton farm price is forecast at 58 cents per pound, 12.5 cents per pound below the 2018/19 estimate. The final 2018/19 upland farm price estimate will be released in October.

Revisions to 2017/18 and 2018/19 U.S. Supply and Demand

As discussed at the beginning of this report, U.S. cotton exports for 2017/18 and 2018/19 were increased in September as reductions were made to the unaccounted estimate in the respective supply and demand balance sheets. For 2017/18, U.S. cotton exports were increased 432,000 bales and are now estimated at nearly 16.3 million bales, while exports for 2018/19 were raised 546,000 bales and are now estimated at about 14.8 million bales. These export levels were obtained by averaging the shipment data reported by the Census Bureau and USDA's *U.S. Export Sales* reports after review of the discrepancy between reported stocks and unaccounted estimates in the cotton balance sheets. Also, based on preliminary 2018/19 data, U.S. mill use was reduced slightly to 2.975 million bales this month.

In addition, cotton stocks data collected and reported by FSA and NASS led to the computation of U.S. cotton ending stocks for 2018/19, which are estimated at 4.85 million bales, compared with 4.2 million bales estimated for 2017/18. For details on the calculation of U.S. cotton ending stocks, see the Highlight section in this report.

International Outlook

Higher Global Cotton Production Forecast in 2019/20

World cotton production in 2019/20 is projected at 124.9 million bales, 700,000 bales below last month's projection but still 5 percent above 2018/19. Additional area is expected to be harvested in 2019/20, and an improved global yield this season is forecast to increase the 2019/20 crop to its second largest on record. Global harvested area in 2019/20 is forecast at 34.7 million hectares (85.6 million acres), as area expectations are higher for a number of producing countries, particularly the United States, where abandonment is forecast much lower than in 2018/19. Meanwhile, the global yield is forecast at 785 kilograms/hectare (kg/ha) in 2019/20, equivalent to 700 pounds per harvested acre.

For India, cotton area in 2019/20 is projected at 12.7 million hectares, slightly above a year ago, as the monsoon has improved planting expectations, and relative domestic prices favor cotton over other crops. In addition, a rebound in yield (506 kg/ha) closer to the 5-year average is projected to increase the crop 3 million bales to 29.5 million bales in 2019/20.

For China, 2019/20 cotton area is forecast marginally lower at 3.45 million hectares, as cotton area remains concentrated in the western region of Xinjiang. The national yield is forecast higher at 1,751 kg/ha but below the 2017/18 record of 1,761 kg/ha. As a result, production is forecast unchanged year-over-year at 27.75 million bales. Meanwhile, cotton area and production in Pakistan are projected to rise in 2019/20. While area rebounds nearly 9 percent to 2.5 million hectares, production is expected to rise 5 percent to 8.0 million bales; the associated yield is 697 kg/ha, which is slightly above the previous 2-year average.

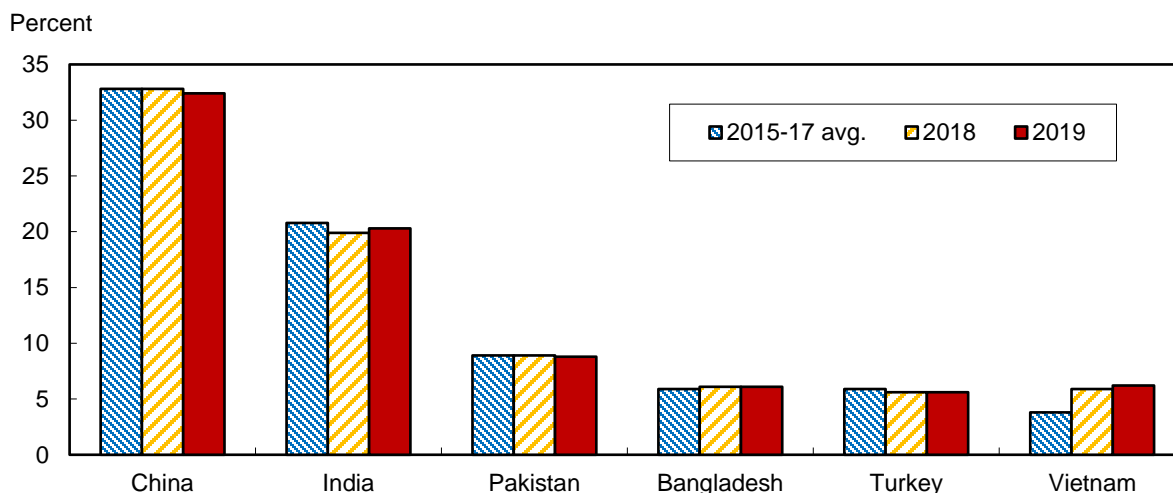
For the Southern Hemisphere countries of Brazil and Australia, cotton area and production are anticipated lower for the 2019/20 season, but planting will not begin for several months. For Brazil, an estimated record crop of 12.8 million bales was produced in 2018/19, so a reduction for 2019/20 is expected with slightly smaller area and a yield that is below the 2018/19 record of 1,731 kg/ha. Brazil's cotton production estimate for 2019/20 is 12.0 million bales, with a yield of 1,686 kg/ha. For Australia, area is expected to be cut nearly in half due to the lack of rainfall to date for the upcoming dryland planting as well as the very low reservoir levels that supply water to the irrigated cotton acreage. Cotton area in Australia for 2019/20 is estimated at 200,000 hectares, with production reaching only 1.4 million bales, the lowest since 2007/08.

World Cotton Mill Use Growth Seen Limited in 2019/20

Global cotton consumption in 2019/20 is forecast at 121.7 million bales, 1 percent above the 2018/19 estimate. World cotton mill use decreased 2 percent in 2018/19 after a growth of 5.7 percent in 2017/18. For 2019/20, consumer demand for cotton products in a number of countries around the world appears to be slowing, which is expected to limit the growth in mill use this season.

Of the top six cotton-spinning countries—China, India, Pakistan, Bangladesh, Turkey, and Vietnam—growth is expected only in India and Vietnam in 2019/20 (fig. 4). Combined, the six countries are projected to account for 73 percent of the total world cotton mill use in 2019/20, similar to a year earlier but 5 percentage points below the 2015-17 average. For China, cotton mill use is forecast at 39.5 million bales in 2019/20, down from 41.0 million bales just two years

Figure 4
Share of total cotton consumption by major spinner



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

ago. In 2019/20, China is expected to account for 32 percent of the global cotton consumption total. In contrast, India's consumption is forecast to rise 3 percent to 24.75 million bales. Consequently, India's share of world cotton mill use is projected at 20 percent, similar to its recent average.

For Pakistan, Bangladesh, and Turkey, cotton mill use is projected flat in 2019/20 at 10.7 million bales, 7.4 million bales, and 6.8 million bales, respectively. Likewise, these countries' share of global mill use remains similar to 2018/19, with a combined share of approximately 21 percent. On the other hand, Vietnam is expected to continue growing, with cotton mill use there projected to reach a record 7.5 million bales in 2019/20, an expansion of more than 5.5 percent year-over-year. As a result, Vietnam is forecast to become the fourth largest cotton-spinning country in 2019/20, with its share of the world total surpassing 6 percent for the first time.

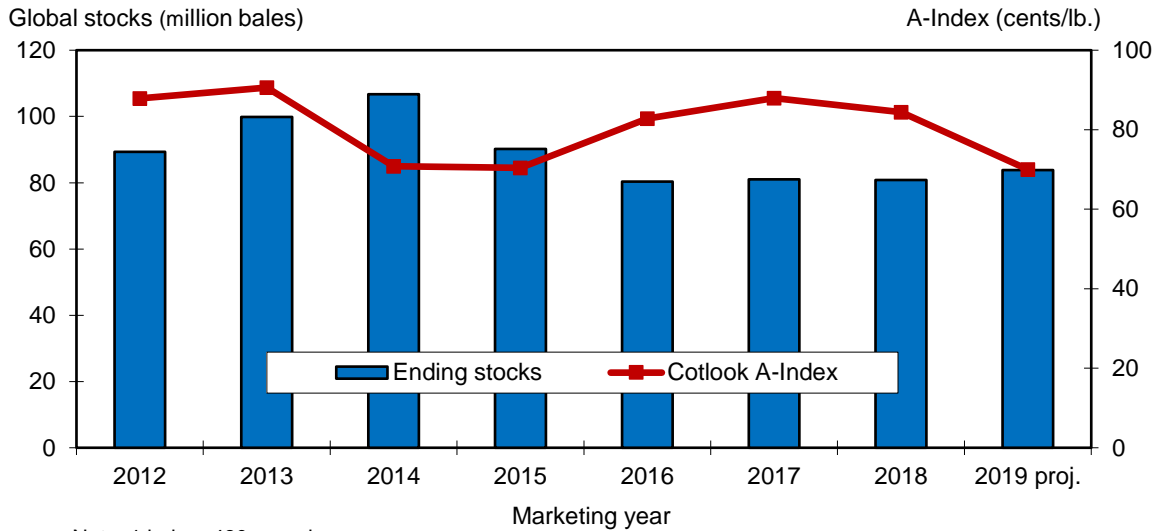
Global Cotton Trade and Ending Stocks Increased

World cotton trade is forecast at 43.3 million bales in 2019/20, 2.2 million bales above a year earlier and the highest since 2012/13's record of 46.4 million bales. This season's increase is largely attributable to Brazil, as offsetting changes occur for the United States and Australia. With Brazil's record 2018/19 crop, shipments there are expected to climb to 8.5 million bales, or a growth rate of 41 percent in 2019/20. In contrast, a reduced Australian crop in 2018/19 and expectations for an even smaller crop in 2019/20 will limit exports considerably. For the major importers, China is projected to lead the way, importing an estimated 10.0 million bales in 2019/20. China is expected to increase its imports as the country adds foreign cotton to the national reserve for rotational purposes.

Based on the latest cotton supply and demand estimates, global ending stocks are projected at 83.7 million bales in 2019/20, 3 million bales (nearly 4 percent) above the beginning level and the highest since 2015/16 (fig. 5). Stocks in 2019/20 are expected to increase similarly in both India and the United States, with each country's stocks rising about 2.4 million bales from the year before. Stocks in India are forecast at nearly 12.4 million bales in 2019/20, or 15 percent of the global total. For China—the largest holder of cotton supplies—cotton stocks this season are

projected at 33.8 million bales, 5 percent lower than in 2018/19, for a 40-percent global share. Meanwhile, the world stocks-to-use ratio is estimated at 69 percent in 2019/20, the highest in 3 years. As a result, the 2019/20 Cotlook A-Index price is expected to decline once again, decreasing to near 70 cents per pound, similar to the level seen 4 years ago.

Figure 5
Global cotton stocks and prices



Note: 1 bale = 480 pounds.

Sources: Cotlook and USDA, Interagency Commodity Estimates Committee.

Highlight

Calculating U.S. Cotton Ending Stocks for 2018/19

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* report. 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 U.S. cotton stocks. NASS determined that existing USDA, Farm Service Agency (FSA) reports are appropriate sources for the following categories of cotton stocks: stocks in public storage and upland cotton stocks in consuming establishments.

For stocks in public storage, see the *Bales Made Available for Shipment (BMAS)* report. For the upland cotton stocks in consuming establishments, see the *Cotton Consumption and Inventory* report (also known as the *Economic Adjustment Assistance Program* report). Both reports can be downloaded from the FSA website. Locate the "Commodity Operations" tab under "Programs and Services" and click on "Program Area Links." Then, click on "Cotton" to find these reports.

In addition, the NASS survey includes extra-long staple (ELS) cotton stocks in consuming establishments and all cotton stocks in private storage (cotton in storage not covered by the *BMAS* report). For these data, see the *Cotton System Consumption and Stocks* report, which can be downloaded from the NASS website. Locate the report under "Publications by Date" and click on "September." The 2019 report was released on September 3.

Table A presents the components used to calculate the 2018/19 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 stocks 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, 2019—the end of the 2018/19 marketing year—are computed to be 4.85 million statistical (480-pound) bales. The final U.S. stock estimate is 650,000 bales above the revised 2017/18 estimate of 4.2 million bales. Although stocks are the highest in 10 years, the stocks-to-use ratio of 27 percent is only the highest since 2015/16.

Table A--U.S. Department of Agriculture's U.S. cotton ending stocks calculation, 2017/18 and 2018/19

Item	Units	2017/18	2018/19
Cotton stocks components:			
(a) Stocks held in public storage and compresses 1/	1,000 running bales	3,424	3,596
(b) Preseason ginnings 2/	1,000 running bales	20	4
(c) Upland cotton mill stocks 3/	1,000 running bales	142	122
(d) Extra-long staple (ELS) cotton mill stocks 4/	1,000 running bales	4	4
(e) Stocks held in private storage 4/	1,000 running bales	40	200
(f) Stocks subtotal (a minus b plus c, d, and e)	1,000 running bales	3,590	3,918
Further adjustments:			
(g) Stocks in transit and at ports 5/	1,000 running bales	496	777
(h) Estimated ending stocks (f plus g)	1,000 running bales	4,086	4,695
(i) Adjusted cotton ending stocks	1,000 480-lb bales	4,200	4,850

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 2019 *Cotton Ginnings* report.

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

4/ Data from NASS's September 2019 *Cotton System Consumption and Stocks* report.

5/ Cotton shipment data (first 2.5 weeks of the subsequent year) from the Foreign Agricultural Service's *Export Sales* report.

Source: USDA, various reports.

Last update: 09/16/19.