



Cotton and Wool Outlook: October 2023

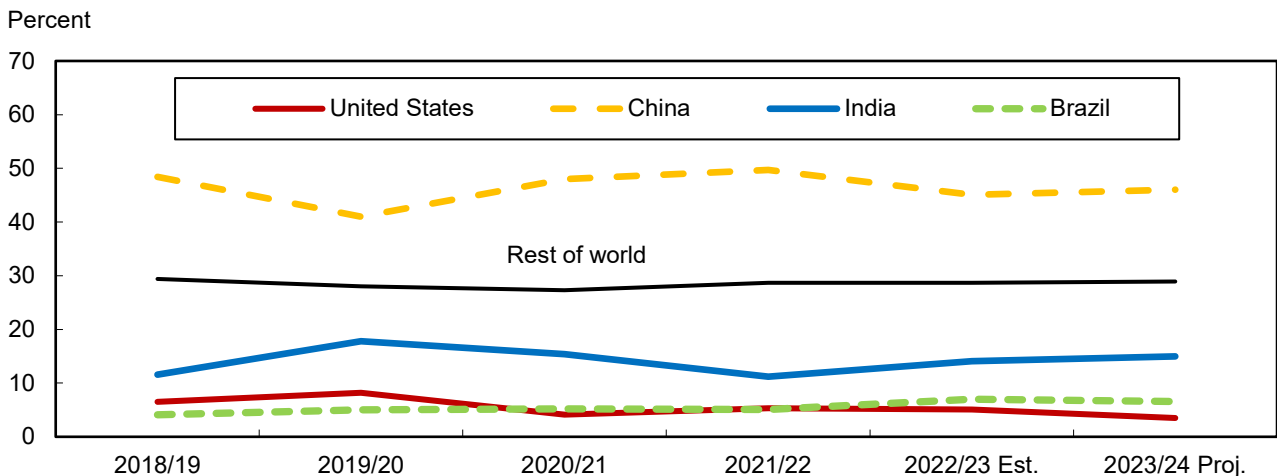
Leslie Meyer and Taylor Dew

China Accounts for Nearly Half of 2023/24 Global Cotton Stocks

The latest U.S. Department of Agriculture (USDA) cotton projections for 2023/24 (August–July) indicate that global cotton beginning and ending stocks decreased by approximately 10 million bales (11 percent) from the previous month. The decrease, however, was largely attributable to a permanent accounting change for Brazil’s production data back to 2000/01. For 2023/24, global cotton ending stocks (79.9 million bales) are 2.9 million bales (3.5 percent) lower than the previous year as mill use is estimated to exceed production. China accounts for nearly half of global cotton stocks once again in 2023/24, with India, Brazil, and the United States combining for an additional 25 percent (figure 1).

World cotton production is forecast at 112.6 million bales in 2023/24, 3.2 percent below the previous year as the global yield is projected to decrease. This year’s production decline is largely attributable to China, the United States, India, and Australia with offsets from Brazil and Pakistan. World cotton trade is projected to rise 17 percent in 2023/24, supporting the expected 4.4-percent increase in global cotton mill use to 115.8 million bales.

Figure 1
Share of global cotton ending stocks



Source: USDA, Economic Research Service using data from USDA, *World Agricultural Supply and Demand Estimates* reports.

Domestic Outlook

U.S. Cotton Crop Forecast Slightly Lower in October

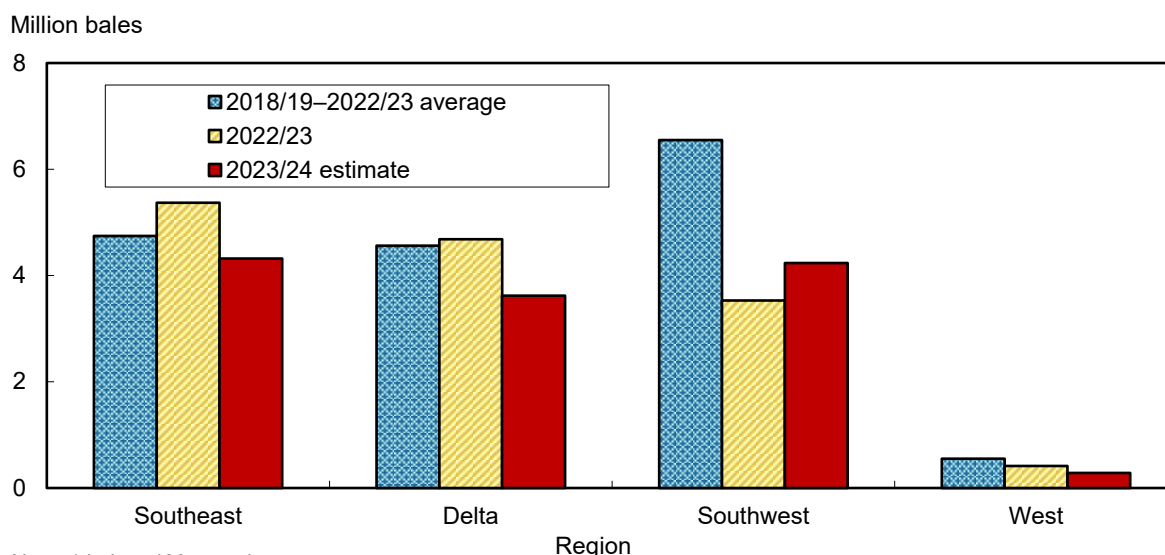
USDA's October *Crop Production* report forecasts 2023/24 U.S. cotton production at 12.8 million bales, 315,000 bales (2.4 percent) below last month's forecast and nearly 1.7 million bales (11.4 percent) below the 2022/23 crop. Harvested area in 2023/24 is higher than last season, but the national yield is lower. If realized, the 2023/24 U.S. cotton crop would be the smallest since 2009/10 with the lowest national yield since 2015/16.

The 2023/24 U.S. upland cotton crop is forecast at nearly 12.5 million bales, compared with last season's 14.0 million bales. During the past 20 years, the October upland production forecast was above the final estimate 11 times and below it 8 times; no production forecast was published in 2013. Past differences between the October forecast and the final production estimate indicate a 2 out of 3 chance for the 2023/24 upland crop to range between 11.6 million and 13.3 million bales.

Upland cotton production this season is forecast lower in three of the Cotton Belt regions while higher in the other (figure 2). In the Southeast, 2023/24 cotton production is projected at 4.3 million bales—20 percent below 2022/23 and 9 percent lower than the 2018/19–2022/23 average—as the lowest area in 7 years is partially offset by an above-average yield. Cotton harvested area in 2023/24 is forecast at 2.2 million acres. The Southeast yield is projected at 935 pounds per harvested acre this season, compared with the 5-year average of 888 pounds.

Cotton production in the Delta is estimated at approximately 3.6 million bales in 2023/24, the smallest in 7 years as both area and yield are below the 5-year average. In 2023/24, cotton harvested acreage is forecast at 1.6 million acres, while the region's yield is projected at 1,083 pounds per harvested acre, the lowest in 6 years.

Figure 2
U.S. regional upland cotton production



Note: 1 bale = 480 pounds.

Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service, *Crop Production* reports.

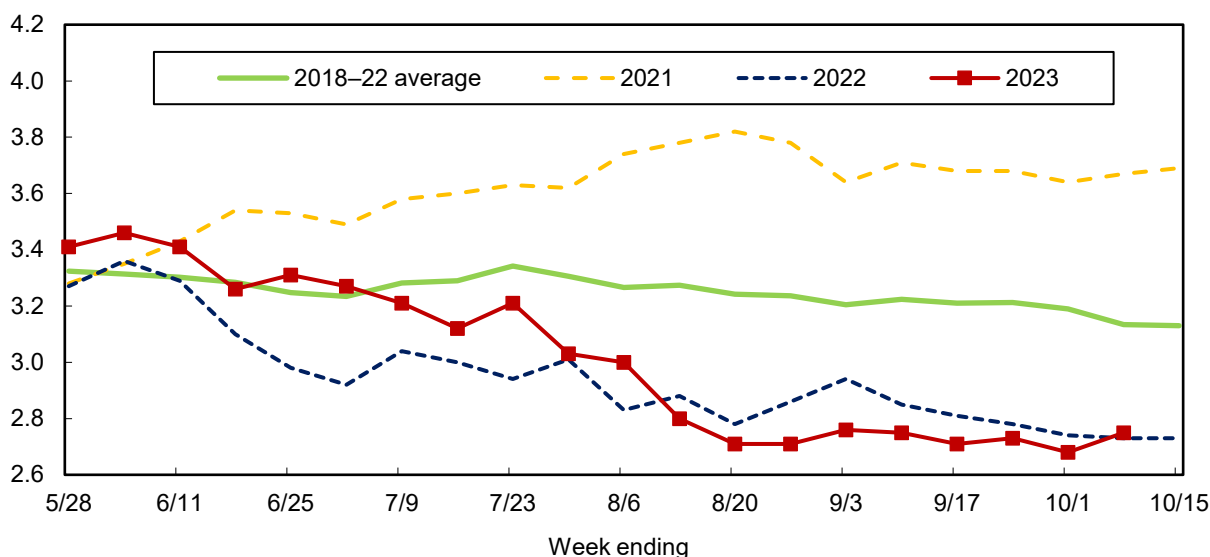
In the Southwest, the 2023/24 upland crop is forecast at 4.2 million bales, up 20 percent from 2022/23's drought-reduced crop that was the smallest in 30 years. While 2023/24 planted area (6.1 million acres) was 30 percent below the previous year, harvested area rebounded as drought conditions improved from those experienced in 2022/23. Harvested area in the Southwest is forecast at 3.95 million acres, implying an abandonment rate of 35 percent, about half that of last season's record of 73 percent. The 2023/24 Southwest upland yield is projected at 515 pounds per harvested acre, compared with the 5-year average of 696 pounds.

In the West, the 2023/24 upland crop is projected at only 286,000 bales, 31 percent below 2022/23 and the lowest production in 90 years as the area moves to alternative crops. The region's upland cotton harvested area (110,000 acres) is the lowest in over 100 years, while this season's yield (1,248 pounds per harvested acre) is forecast at a 4-year low. The extra-long staple (ELS) crop—grown mainly in the West—is projected at 356,000 bales in 2023/24, compared with 470,000 bales in 2022/23. With last season's considerably lower demand and rising ending stocks, reduced ELS price prospects limited area and production in 2023/24.

Total 2023/24 U.S. cotton harvested area is estimated at 8.0 million acres, compared with last season's 7.3 million acres that was the lowest since a similar acreage was harvested in 1983/84. The national yield is projected at 767 pounds per harvested acre, compared with 2022/23's record of 950 pounds. As of October 8, 25 percent of the U.S. cotton crop was harvested, below last season's 28 percent but above the 2018–22 average of 24 percent. In addition, nearly 1 million bales had been ginned as of October 1, slightly below the comparable period last year. U.S. cotton crop conditions for the last half of the season were near those for last season (figure 3). As of October 8, 32 percent of the cotton area was rated “good” or “excellent,” compared with 30 percent last year, while 41 percent of the crop area was rated “poor” or “very poor,” compared with 47 percent a year ago. For current production estimates by State, see table 10 published separately with this report.

Figure 3
U.S. cotton crop conditions

Index (3=fair and 4=good)



Source: USDA, Economic Research Service using data from USDA, *Crop Progress* reports.

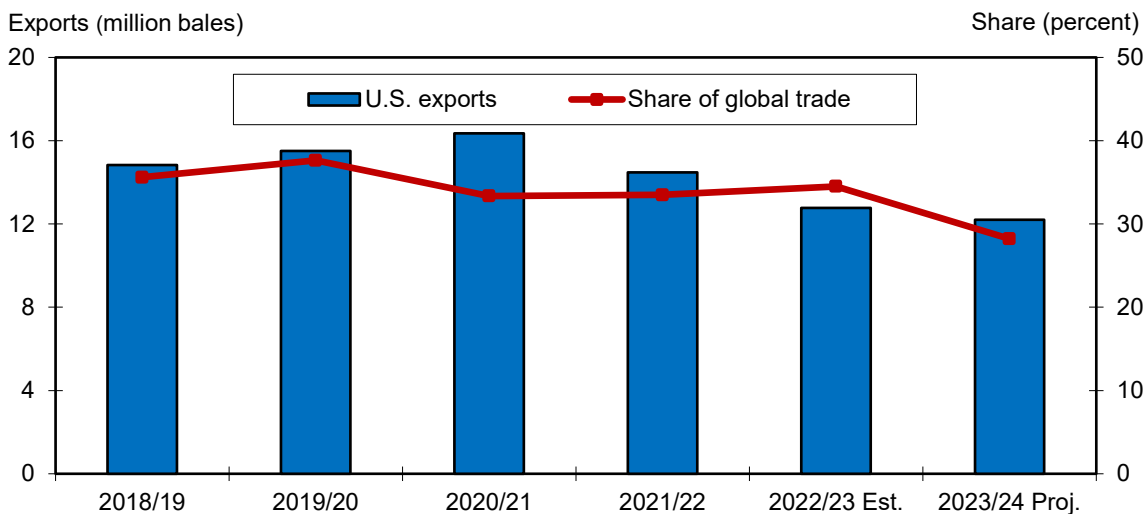
U.S. Cotton Demand and Stocks Estimates Reduced Slightly

The U.S. cotton demand estimate for 2023/24 is projected at 14.35 million bales in October, nearly 0.5 million bales (3 percent) below 2022/23 and 2.5 million bales below the 3-year average as the smaller crop limits demand prospects. U.S. cotton exports account for the bulk of demand and are forecast at 12.2 million bales in 2023/24, with mill use expected to account for the remaining 2.15 million bales. Despite a higher world trade forecast this season and strong foreign import demand, U.S. cotton supplies—expected to be their lowest in 8 years—are constraining export prospects. Uncertainties about the world economy and competition from synthetic fibers are also forecast to limit global cotton mill use growth in 2023/24. Based on the October projections, the 2023/24 U.S. share of world trade is forecast near 28 percent—6 percentage points below the previous 3-year average and the lowest since 2015/16 (figure 4).

With the U.S. cotton demand projection marginally lower in October and the production estimate also reduced this month, 2023/24 U.S. ending stocks are forecast at 2.8 million bales. U.S. cotton stocks are nearly 1.5 million bales below last season and the lowest since 2016/17 when a similar level was recorded. The stocks-to-use ratio is forecast at 19.5 percent at the end of 2023/24, compared with 29 percent in 2022/23, and the lowest in 3 years. Based on the U.S. and global cotton supply and demand estimates and recent prices, the 2023/24 average U.S. upland cotton farm price is forecast at 80 cents per pound, compared with the final 2022/23 price of 84.8 cents per pound.

Figure 4

U.S. cotton exports and share of global trade



Note: 1 bale = 480 pounds.

Source: USDA, Economic Research Service using data from USDA, *World Agricultural Supply and Demand Estimates* reports.

International Outlook

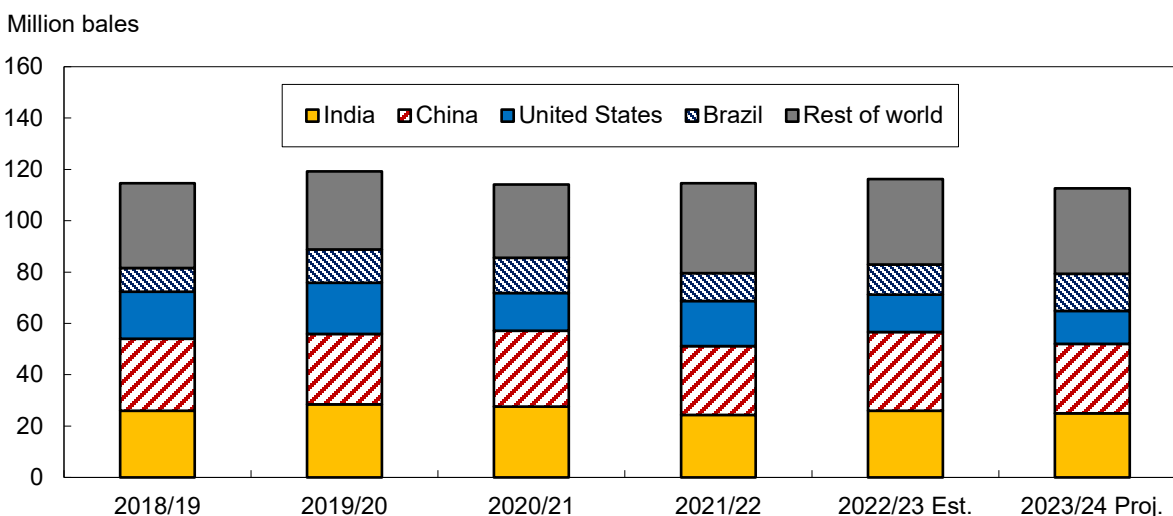
Global Cotton Production To Decline in 2023/24

World cotton production in 2023/24 is projected at 112.6 million bales, a 3.2-percent decline from last season's 116.3 million bales. The October production estimate is 210,000 bales higher than September, as larger crops in Brazil, Argentina, and Tanzania offset reductions in the United States, Australia, and Greece. Global harvested area is forecast at 31.9 million hectares (78.9 million acres) in 2023/24, marginally above last season. The world cotton yield in 2023/24 is projected at 768 kilograms (kg) per hectare (685 pounds per acre), compared with the 3-year average of 784 kg per hectare (699 pounds per acre).

Cotton production among the major producing countries this season is mixed compared with 2022/23 (figure 5). Production in China—this year's projected leading cotton producer—is forecast at 27.0 million bales, 12 percent (3.7 million bales) lower than 2022/23, as area and yield are below last season. Growing conditions were generally favorable after an early-season setback that is expected to keep the national yield from matching 2022/23's record of 2,122 kg per hectare. For 2023/24, a yield of 2,027 kg per hectare is forecast, with harvested area estimated at 2.9 million hectares. China is expected to account for 24 percent of world cotton production this season.

For India, 2023/24 cotton production is projected at 25.0 million bales, nearly 4 percent (1 million bales) below the year before, with reductions in area and yield. Harvested area is forecast 2 percent lower, at 12.7 million hectares, as alternative crops were favored over cotton. Yield is forecast at 429 kg per hectare, slightly below last year and the 3-year average. India is expected to account for 22 percent of world production this season, the same as in 2022/23.

Figure 5
World cotton production



Note: 1 bale = 480 pounds.

Source: USDA, Economic Research Service using data from USDA, *World Agricultural Supply and Demand Estimates* reports.

Cotton production in Pakistan is projected to rebound to 6.5 million bales in 2023/24 after last season's floods that reduced harvested area and yield. Harvested area in 2023/24 is estimated at 2.6 million hectares while the national yield is forecast at 544 kg per hectare, above the 3-year average. Cotton production estimates for Greece were reduced again in October after additional flooding occurred in late September that compounded the historic flooding in early September. With lower area and yield projections, the production estimate now shows a year-to-year decrease of 500,000 bales (34 percent) to 950,000 bales, the smallest crop since 2010/11.

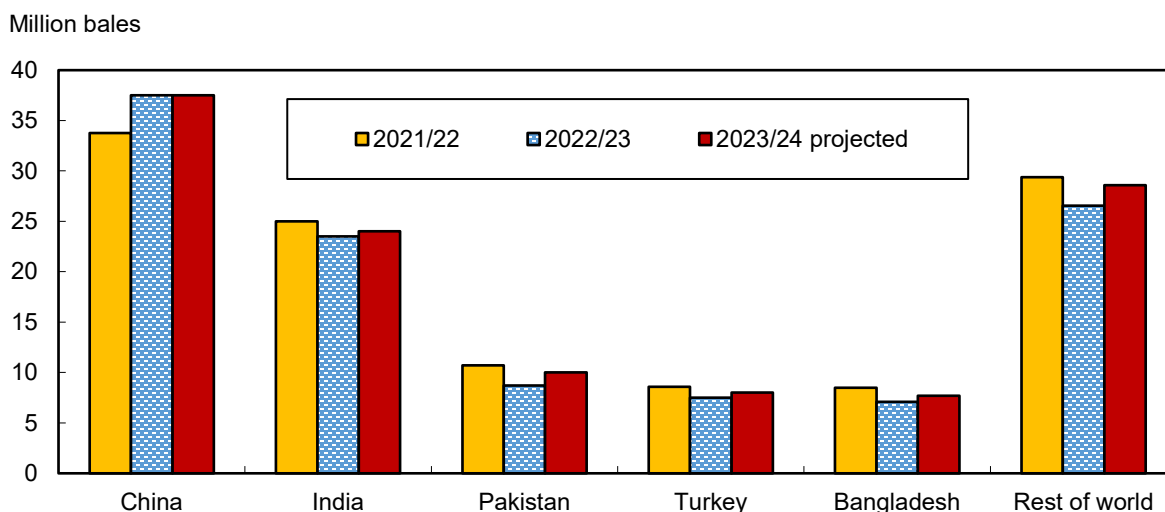
The 2023/24 production estimate for Brazil was increased this month to a record 14.56 million bales, a year-to-year increase of 2.8 million bales (24 percent) as a record yield of 1,910 kg per hectare is projected. With an 11-percent reduction in the U.S. cotton crop this season, Brazil is expected to surpass the United States and rank as the third largest producer in 2023/24, accounting for 13 percent of the global crop. Additionally, in October 2023, USDA made a permanent shift of Brazil's cotton production data in its supply and demand balance sheet back to 2000/01. The marketing year production reassignment now more closely aligns with the shift that occurred in Brazil's cotton harvest activities. For more details on this USDA change, see the Highlight section in this report.

For Australia, 2023/24 cotton production is forecast to decrease 700,000 bales to 5.1 million. Projected area for 2023/24 is forecast to decline 28 percent to 470,000 hectares, with dryland area forecast to be significantly lower as planting begins this month. With most of the projected cotton area under irrigation in 2023/24, Australia's yield is forecast at 2,388 kg per hectare, the highest since 2014/15.

World Cotton Mill Use Projected To Increase in 2023/24

Global cotton mill use in 2023/24 is forecast at 115.8 million bales, 4.4 percent (4.9 million bales) above 2022/23 as mill demand is expected to rebound to near the level achieved in 2021/22. Cotton mill use for each of the leading cotton-spinning countries—China, India, Pakistan, Turkey, and Bangladesh—is forecast to equal or exceed last year's level in 2023/24, with the top 5 countries accounting for 75 percent of the global total (figure 6).

Figure 6
Leading global cotton consumers



Note: 1 bale = 480 pounds.

Source: USDA, Economic Research Service using data from USDA, *World Agricultural Supply and Demand Estimates* reports.

For China, 2023/24 cotton mill use is projected at 37.5 million bales, unchanged from the previous year in which mill use expanded a remarkable 11 percent. China remains the leading cotton spinner in 2023/24, contributing 32 percent of the global total. In India, cotton mill use is forecast to rise 2 percent (500,000 bales) to 24.0 million bales in 2023/24 or 21 percent of global mill use.

Cotton mill use is forecast to increase in Pakistan, Turkey, Bangladesh, and Vietnam in 2023/24 and account for a combined 28 percent of world mill use. In Pakistan, mill use is projected to rebound significantly (15 percent) in 2023/24 after last season's flood-damaged crop that limited supplies for local mills. Cotton use is forecast to reach 10 million bales in 2023/24, 1.3 million bales higher than 2022/23 but still below prior years. Above-average growth rates are also projected for Turkey, Bangladesh, and Vietnam this season. For Turkey, mill use is projected to rise more than 6.5 percent (500,000 bales) to 8.0 million bales. Cotton mill use in Bangladesh for 2023/24 is expected to increase 8.5 percent (600,000 bales) to 7.7 million bales. Mill use in Vietnam is forecast 7 percent (450,000 bales) higher at 6.9 million bales.

Global Cotton Trade Higher; Stocks To Decrease in 2023/24

World cotton trade for 2023/24 is projected at 43.2 million bales, 6.2 million bales or 17 percent above the year before. The higher trade is supported by increased import expectations by China as they rotate cotton stocks in their national reserve. The projected growth in global cotton mill use is also supportive of higher cotton trade in 2023/24. Cotton exports for the United States are forecast at 12.2 million bales in 2023/24, down 570,000 bales or 4.5 percent from 2022/23, as lower supplies limit export prospects. Brazil's exports, however, are expected to benefit from a record crop, with cotton exports forecast to increase more than 5 million bales to 11.8 million bales in 2023/24, nearly matching the U.S. share of global trade. Australia's cotton exports in 2023/24 are projected to decline along with its crop, reaching 5.7 million bales, but still the second highest since 2012/13.

With global mill use increasing this season, China, Bangladesh, and Vietnam are projected as the leading raw cotton importers in 2023/24. Imports by China are forecast at 10.0 million bales this season, up from 6.2 million bales in 2022/23. For Bangladesh, 2023/24 imports are forecast at 7.7 million bales (up 1.15 million bales), while Vietnam imports are projected at 6.9 million bales (up 430,000 bales) in 2023/24. Cotton imports continue to support the textile industries in these countries.

Based on the latest cotton supply and demand projections, global ending stocks are forecast at 79.9 million bales in 2023/24, 3.5 percent (2.9 million bales) below the year before. For the major producing countries, 2023/24 stock changes are forecast to vary, with declines in China, the United States, and Brazil more than offsetting increases for India and Pakistan.

Stocks in China are projected to decrease slightly (600,000 bales) to 36.8 million bales, or 46 percent of the global total in 2023/24. U.S. stocks are forecast 34 percent lower at 2.8 million bales and the lowest since 2016/17. Cotton stocks in Brazil are projected at 5.2 million bales in 2023/24, 9 percent lower year-over-year. In contrast, cotton stocks in India are projected to increase slightly (300,000 bales) to 12.0 million bales and account for 15 percent of 2023/24 global ending stocks. Cotton stocks are expected to reach nearly 2.2 million bales (+620,000 bales) in Pakistan in 2023/24. Meanwhile, the global stocks-to-use ratio is estimated at 69 percent in 2023/24, compared with last season's 75 percent.

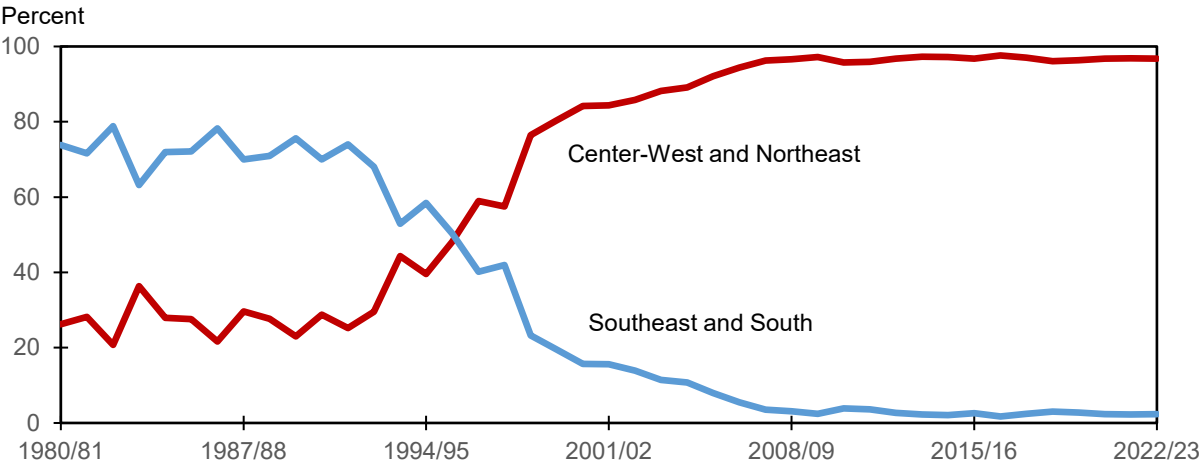
Highlight

Changing USDA’s Marketing Year Assignment of Brazil’s Cotton Production Data

USDA’s cotton supply and demand estimates for each country are based on an August–July marketing year to coincide with the Northern Hemisphere fall harvest and subsequent demand for that production. However, for cotton grown in Southern Hemisphere countries like Brazil, harvest historically occurred much later in the August–July marketing year with demand for that production reflected in the next marketing year.

Over the last 25 years, a large proportion of Brazil’s cotton production shifted geographically, with most of the crop now produced in the later-harvested Center-West and Northeast regions (figure 7). In addition, more recent data indicate that the largest share of Brazil’s cotton production is produced as a second crop. This effectively moves most of the country’s cotton harvest into the early months of the August–July marketing year instead of the late months of the marketing year as previously observed and recorded. The harvest shift led to a disconnect between USDA’s cotton supply and trade data for Brazil as the crop was effectively placed into ending stocks. This allocation artificially elevated marketing year ending stocks for Brazil and the world, which was particularly noticeable in recent years as Brazil’s share of global cotton production trended higher.

Figure 7
Brazil’s regional cotton production shares



Source: USDA, Economic Research Service using data from Brazil’s Companhia Nacional de Abastecimento (CONAB).

Beginning with the October 2023 *World Agricultural Supply and Demand Estimates (WASDE)* report, USDA changed its marketing year assignment of the Brazil Ministry of Agriculture’s cotton production data—which remain the basis for USDA’s published estimates for Brazil—going back to 2000/01 to better align Brazil’s cotton harvest. USDA’s previous marketing year 2000/01–2022/23 area, production, and yield estimates shift 1 year later and become the 2001/02–2023/24 estimates. The previous 2000/01 estimates for area and production are replaced by the average of the 1999/00 and 2001/02 estimates, with the new yield derived from

the area and production revision (table A). In addition to shifting the 2022/23 estimates to 2023/24, a revision to the Brazil Ministry of Agriculture's cotton production data provided a further upward adjustment by USDA in October, with Brazil's 2023/24 production now estimated at a record 14.56 million bales.

Brazil's cotton production and ending stocks estimates were adjusted each year back to 2000/01, but no changes were made to historical mill use or trade estimates. USDA's move to better align Brazil's cotton production estimates with harvest activity provides a clearer connection between supply and demand in a given marketing year, especially with Brazil's increased importance in global trade. The reassignment of Brazil's production data also offers more consistency in USDA's cotton balance sheet estimates for Brazil and the world.

Table A—U.S. Department of Agriculture's change in marketing year assignment of Brazil's cotton production data

Marketing year	Production		Harvested area		Yield	
	Sep. 2023	Oct. 2023	Sep. 2023	Oct. 2023	Sep. 2023	Oct. 2023
	1,000 bales		1,000 hectares		Kilograms/hectare	
1999/00	3,216	3,216	752	752	931	931
2000/01	1/ 4,312	3,764	853	803	1,101	1,021
2001/02	3,519	4,312	748	853	1,024	1,101
2002/03	3,890	3,519	735	748	1,152	1,024
2003/04	6,015	3,890	1,100	735	1,191	1,152
2004/05	5,960	6,015	1,180	1,100	1,100	1,191
2005/06	4,760	5,960	855	1,180	1,212	1,100
2006/07	7,000	4,760	1,095	855	1,392	1,212
2007/08	7,360	7,000	1,075	1,095	1,491	1,392
2008/09	5,580	7,360	845	1,075	1,438	1,491
2009/10	5,480	5,580	835	845	1,429	1,438
2010/11	9,000	5,480	1,400	835	1,400	1,429
2011/12	8,620	9,000	1,395	1,400	1,345	1,400
2012/13	6,020	8,620	895	1,395	1,464	1,345
2013/14	7,960	6,020	1,120	895	1,547	1,464
2014/15	7,180	7,960	975	1,120	1,603	1,547
2015/16	5,920	7,180	955	975	1,350	1,603
2016/17	7,020	5,920	940	955	1,626	1,350
2017/18	9,220	7,020	1,175	940	1,708	1,626
2018/19	13,000	9,220	1,640	1,175	1,726	1,708
2019/20	13,780	13,000	1,665	1,640	1,802	1,726
2020/21	10,820	13,780	1,370	1,665	1,720	1,802
2021/22	11,720	10,820	1,600	1,370	1,595	1,720
2022/23	14,400	11,720	1,660	1,600	1,889	1,595
2023/24	2/ 13,800	14,560	1,670	1,660	1,799	1,910

Note: 1 bale = 480 pounds.

1/ October 2023 production and harvested area estimates based on average of 1999/00 and 2001/02. Yield is derived.

2/ October 2023 production estimate revised based on CONAB data released in early October. Yield is derived.

Source: USDA, Economic Research Service using data from USDA, World Agricultural Outlook Board.

Last update: 10/16/23.

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