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Cotton Outlook

Thursday, February 15, 2024

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THE WORLD AND UNITED STATES COTTON OUTLOOK

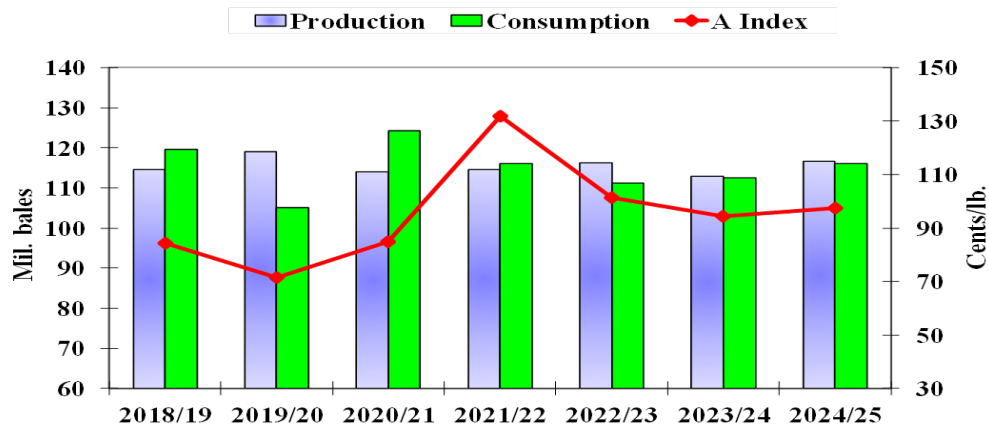
Stephen MacDonald, Kent Lanclos, Leslie Meyer, & Graham Soley.

U.S. Department of Agriculture

Introduction

The U.S. Department of Agriculture’s (USDA’s) first 2024/25 global cotton projections anticipate that world production will slightly exceed consumption, raising global stocks by 900,000 bales. World cotton area is expected to rise about 1 percent and production by 3 percent, with the United States accounting for virtually the entire increase in world production. Global cotton consumption growth is anticipated to increase following seasons of decline and slow growth, as world textile supply chains continue to recover from recent shocks. China’s imports are projected to remain high as the world economy continues relatively steady growth and China’s cotton production declines. The A-Index is forecast to rebound modestly after falling for two years to average 97.5 cents per pound.

**World Production, Consumption, and Prices
2018/19 through 2024/25 projection**

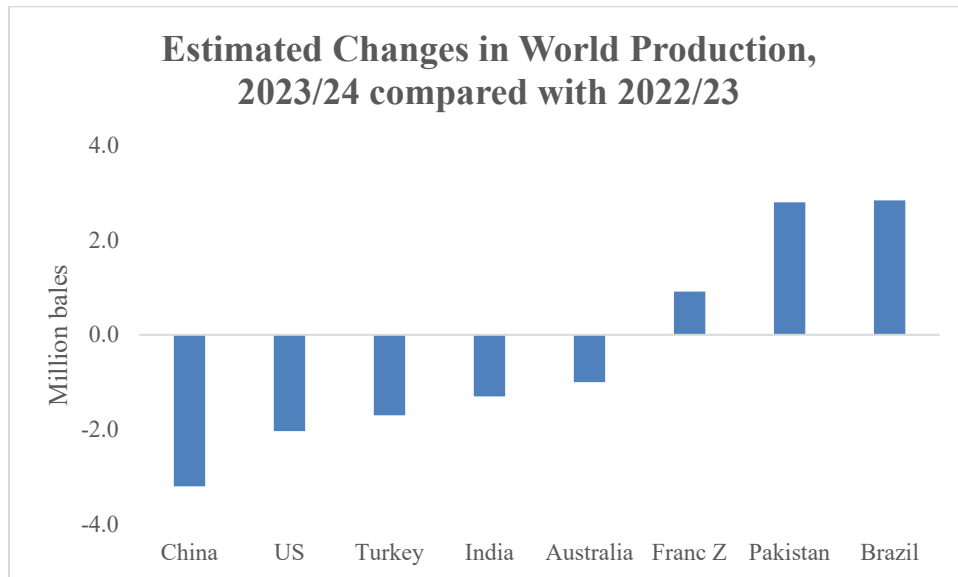


U.S. cotton production in 2024/25 is expected to rise to 16.0 million bales, driven by a nearly 8-percent increase in planted area and a 15-percent decline in the abandonment rate. Domestic mill use is forecast to remain unchanged from 2023/24’s relatively low level, the lowest U.S. mill use since 1884/85. Exports are projected higher at 13.8 million bales, consistent with a recovering U.S. production level and share of global trade. Ending stocks and the stocks-to-use ratio are forecast higher as well.

World Cotton Situation, 2023/24

World Cotton Production, 2023/24

World cotton production fell 3 percent from the year before in marketing year 2023/24, down 3.4 million bales to 112.8 million, its lowest in 7 years. Lower cotton prices brought area down in a number of countries, partly offset by a weather-driven rebound in Pakistan and continued growth in Brazil's area. Yield changes were mixed—lower in the United States, China, India, and Turkey, but rebounding sharply in Pakistan, the Franc Zone, and Brazil. China's 2023/24 yield was only slightly below the previous year's record level, but 2023/24 yields in India and Pakistan compared much more poorly with the levels achieved a decade earlier, limiting output in those countries. In contrast, Brazil's cotton yield reached a record high and was 30 percent higher than 10 years before, making Brazil the world's third largest cotton producer for the first time in 2023/24.



In China, cotton output fell 3.2 million bales to 27.5 million in 2023/24. This was a sharp drop from 2022/23 when production jumped 15 percent to its highest level in 9 years, but despite the decline in 2023/24, China retained its position as the world's largest cotton-producing country. Area planted to cotton in Xinjiang retreated from the record-high achieved in 2022/23, and area outside of Xinjiang continued the decline that began there in 2015/16. With about 95 percent of China's cotton production now in Xinjiang, an extremely cold spring there initially raised concerns about China's 2023/24 yields, but the early May low temperatures that slowed development and necessitated replanting were rapidly followed by periods of above average but not extreme temperatures. Marketing year 2023/24 Xinjiang yields fell from the record high level reached in 2022/23, but the volume of cotton ginned and inspected there through January 2024 indicates yields significantly outperformed what the early-season weather shock seemed to

portend.

India saw cotton area decline slightly in 2023/24, down 200,000 hectares to 12.7 million, a level mid-way between the averages achieved in the previous 5 and 10 years. India's 2023/24 monsoon started slightly late, and rainfall was uneven in July, and deficient across many cotton producing states in August. With precipitation significantly above average in September, the monsoon's total rainfall was only slightly below average, but the uneven distribution during the season suggested cause for concern about yield performance. Additionally, reports emerged of bollworm problems in Northern India, but the majority of the country seems to have escaped significant pest problems in 2023/24. USDA estimates that yields fell 3 percent from the year before in 2023/24 to about the level reached in 2021/22, and representing a considerable decline from the levels reached a decade earlier. At 25.0 million bales, the crop is forecast down 1.3 million bales from the year before, and below previous averages. Widespread concern about India's uneven weather and pest problems year after year have driven many observers' production forecasts lower, but the rebound this year in arrivals through the end of January support the forecast of 25.0 million bales.

The 2023/24 Brazil cotton harvest was completed by October 2023, and at 14.6 million bales it represents a new record, with a 2.8-million-bale increase driven by record yields. Yields recovered from the sharply reduced level realized in 2022/23, aided by the return to normal April-May rainfall levels in Mato Grosso, and likely boosted by below-average rain during the November-January period which facilitated the transition from soybeans to cotton in the state. Area was nearly 4 percent higher than the year before, but remained marginally below the record level seen in 2020/21.

With this 14.6-million-bale crop, and with U.S. production diminished by poor weather in West Texas, Brazil replaced the United States as the world's third largest cotton producer in 2023/24. U.S. production fell 2 million bales from the year before in 2023/24 to 12.4 million bales. Both area and yield fell in the United States (see the **U.S. Cotton Situation, 2023/24** section, below).

Pakistan's production rebounded strongly in 2023/24 as area jumped to its highest in 4 years and yields rebounded from the previous year's flood-reduced levels. Pakistan's crop began arriving at gins substantially earlier than in previous years in 2023/24, but yields remained below 2021/22 and earlier years. Pakistan's yields have been highly volatile and trending downwards since 2015/16. While production rose 72 percent from the year before in 2023/24, at 6.7 million bales, it significantly undershot the harvests above 10 million bales Pakistan had achieved as recently as 2014/15.

In West Africa's Franc Zone, area declined slightly from the year before in 2023/24, but production rose about 900,000 bales to 4.9 million as yields rebounded—up 24 percent—from

the previous season's pest-reduced level. Insect infestations (primarily jassids) reportedly continued this year to some extent, but partial-year ginning data from the Programme Regional de Production Integree du Coton en Afrique (PR-PICA) indicate the impact was substantially diminished.

Australia's 2023/24 cotton production is forecast 1 million bales lower than the year before, at 4.8 million bales. Irrigated area in Australia was reported down significantly, driven in part by slightly reduced irrigation supplies and somewhat less favorable prices at planting. Dryland area was boosted by above-average November rainfall, but nonetheless fell from the year before due to substantial year-to-year declines in rainfall during September-October. December and January rainfall reached average levels despite the presence of El Nino conditions, and precipitation during the concluding months of the season will be critical in determining the crop's outcome.

Turkey's 2023/24 output fell 1.7 million bales year-to-year, a 35-percent decline to 3.2 million bales as both area and yield fell. Lower prices resulted in reduced area in Turkey, down 21 percent to slightly below its 2021/22 level. Yield fell 18 percent due to excessive rains early in the season and high temperatures in August and September.

2023/24 China Supply and Demand

China's 2023/24 consumption is mostly unchanged at 37.0 million bales and slightly above the five-year average. Imports are forecast at 12.0 million bales and nearly double the level witnessed the previous year. Greater import demand from both domestic mills and state reserves is expected to boost imports to a 3-year high as recent state auctions depleted stocks of foreign cotton. China's 2023/24 ending stocks are projected above the five-year average at 39.9 million bales.

China Cotton Supply and Demand 2022/23 and 2023/24

Attribute	Unit	2022/23	2023/24	Change (%)
Beginning Stocks	mil. bales	38.1	37.4	-1.7
Area Harvested	mil. HA	3.2	2.9	-7.9
Production	mil. bales	30.7	27.5	-10.4
Imports	"	6.2	12.0	92.6
Total Supply	"	75.0	76.9	2.5
Exports	"	0.1	0.1	0.0
Domestic Use	"	37.5	37.0	-1.3
Ending Stocks	"	37.4	39.9	6.6
State Reserve	"	12.3	14.5	18.1
Stock to Use %	%	99.5	107.6	8.1

As the world’s largest cotton consumer and importer of cotton lint and yarn, China’s supply and use situation is crucial to the overall direction and vitality of the global cotton supply chain. Like global consumption, China’s domestic use is mostly unchanged but notably below the level witnessed 3 years ago when consumption exceeded 41.0 million bales. Suppressed global imports of apparel in major consuming markets including the United States and European Union continue to slow China’s exports of textile and apparel products.

World Cotton Consumption, 2023/24

World cotton consumption in 2023/24 is forecast at 112.5 million bales, 1.2 percent higher than in 2022/23. While world economic growth in calendar 2023 and 2024 was slightly lower than in 2022, according to the International Monetary Fund’s (IMF) January 2024 World Economic Outlook, a 10-percent decline over 2 years through 2022/23 suggested that a year of above-average consumption growth could be expected. The COVID-19 pandemic has resulted in remarkably large swings in consumption in 2019/20 (12 percent downward) and 2020/21 (18 percent upward), and the 2021/22 spike in world cotton prices helped drive world consumption in 2022/23 to its lowest non-pandemic year level since 2013/14. The lagged effects of falling cotton prices both in absolute terms and relative to polyester, along with relatively steady global economic growth and the reopening of China’s economy, were widely expected to support a world consumption growth rate distinctly above the long-run average rate of 1.4 percent.

World Cotton Supply and Demand 2022/23 and 2023/24

Attribute	Unit	2022/23	2023/24	Change (%)
Beginning Stocks	mil. Bales	76.4	83.0	8.6
Area Harvested	mil. HA	31.7	31.7	0.0
Production	mil. Bales	116.3	112.8	-3.0
Imports	"	37.7	42.9	13.8
Total Supply	"	230.4	238.7	3.6
Exports	"	37.0	42.9	16.0
Domestic Use	"	111.2	112.5	1.2
Ending Stocks	"	83.0	83.7	0.9
Stock to Use %	%	74.6	74.4	-0.2

During 2023/24, cotton consumption has faced headwinds from clothing retailers’ continued concerns with inventories built up during the pandemic surge in consumption of goods rather than services and supply chain delays that incentivized precautionary purchases. As large economies pivoted to some extent back to services spending from elevated spending on goods, retailers’ desire to control inventories was compounded by justifiable concerns that an economic

downturn in the United States and elsewhere could be on the horizon. In retrospect, these concerns were not realized, but conversely, the economic surge anticipated to occur in China as the country emerged from lock-down also failed to materialize. While China's retail sales of clothing have partly recovered in real terms from the previous year's severely depressed levels, the benefits of this recovery for world cotton consumption have likely been largely offset by reduced imports of cotton textiles in major economies. Cotton textile imports by the United States, the EU, Japan, and other high income countries fell starting in mid-2022/23 as importers, wholesalers, and retailers all sought to de-risk their inventory management in a period of rising interest rates, and remained low through the end of calendar 2023.

2023/24 World Trade and Stocks

In contrast with world consumption, world cotton trade in 2023/24 rose robustly, driven in no small part by events in China. China's 2023/24 imports are forecast at 12 million bales, about double their relatively depressed level of the year before, and accounting for 28 percent of global cotton imports. World trade in 2023/24 is forecast 6 million bales higher than the year before, at nearly 43 million bales.

After China, the largest importers are Bangladesh and Vietnam, where increased imports are also expected, but with much smaller rates of growth, and a combined share of world imports of 33 percent. Lower imports are foreseen by Turkey and Pakistan, the former driven by the falling consumption and the latter by a rebounding domestic crop.

The United States is expected to remain the world's largest exporter despite 2 years of falling production, with 29 percent of world trade, but with Brazil's exports doubling from the year before in 2023/24 to 11.2 million bales. Brazil is forecast to account for 26 percent of world trade, approaching the U.S. share. Australia's exports are projected lower as production there continues to retreat from its record 2021/22 level, while exports from the Franc Zone are expected to rise. Australia's share of world trade is projected at 13 percent and the Franc Zone's at 11 percent.

World ending stocks in 2023/24 are expected to be little changed from the year before, up 700,000 bales to 83.7 million. The largest declines are occurring in the United States and Turkey, where production is lower, while China's stocks are projected 2.5 million bales higher as both State Reserve and private stocks rise.

U.S. Cotton Situation, 2023/24

Area and Production

U.S. all-cotton production in 2023/24 is estimated at 12.4 million bales, 14 percent below last season's crop and the lowest since 2009/10. Cotton planted acreage in 2023—at 10.2 million acres—decreased approximately 25.5 percent from the year before and is the lowest planted area since 2016/17. The U.S. abandonment rate is projected at 31 percent, down from 2022/23's record 47 percent, as dry conditions continued in the Southwest, primarily in Texas. As a result, the U.S. harvested area is estimated at 7.1 million acres—slightly below 2022/23 and the smallest harvested acreage since 1868/69. The national yield is projected at 845 pounds per harvested acre, down from 2022/23's record of 953 pounds. Upland production is estimated at approximately 12.1 million bales—nearly 2 million bales below 2022/23—with an average yield of 841 pounds per harvested acre, compared with the previous year's record of 945 pounds. Extra-long staple (ELS) cotton production is estimated at 307,000 bales, the lowest since 1987/88.

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

	Unit	2019/20	2020/21	2021/22	2022/23	2023/24
Planted acres	mil. acres	13.7	12.1	11.2	13.7	10.2
Harvested acres	mil. acres	11.5	8.2	10.3	7.3	7.1
Abandonment rate	%	16.3	32.1	8.4	47.0	30.9
Yield/harvested acre	lbs./acre	832	854	820	953	845
Production	mil. Bales	19.9	14.6	17.5	14.5	12.4

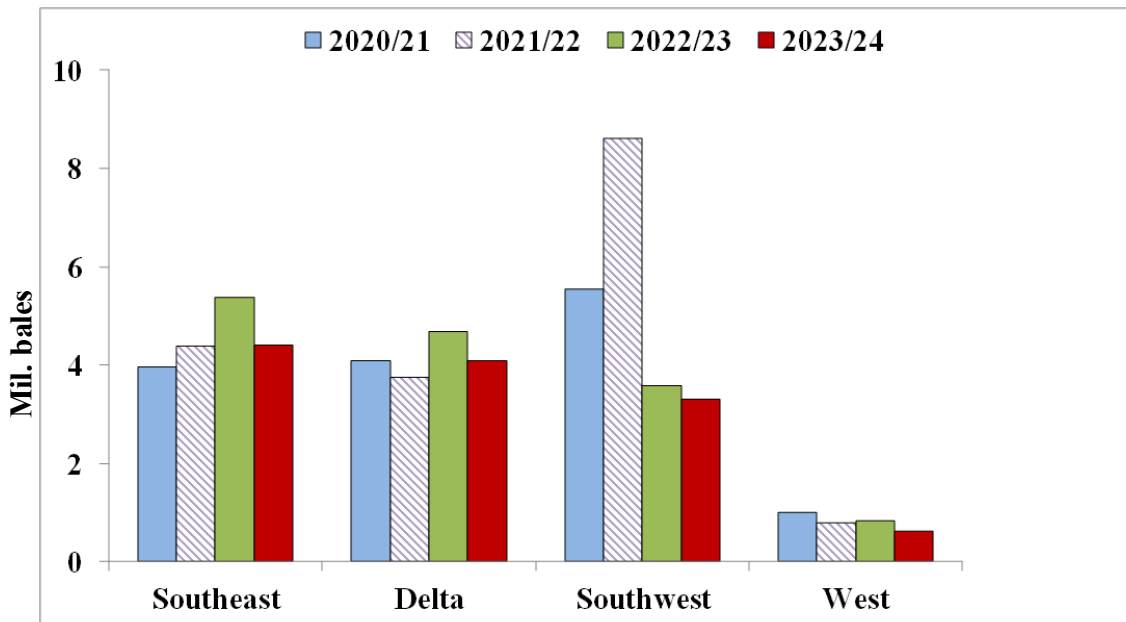
Compared with last season, 2023/24 upland cotton production was smaller in each of the four Cotton Belt regions. Southeast cotton production decreased 18 percent in 2023/24 to 4.4 million bales—nearly 400,000 bales below the 5-year average—but contributed 36 percent of the U.S. upland crop. Cotton area declined to 2.25 million acres, the lowest in 7 years, as area shifted back to corn. The Southeast yield (951 pounds per harvested acre) decreased from 2022/23 but equaled the 3-year average and the third highest on record.

Meanwhile, 2023/24 Delta cotton production declined 12 percent from the previous year to 4.1 million bales, slightly below the 3-year average. The region's crop accounted for 34 percent of the total 2023/24 U.S. upland production. Planted and harvested area of 1.6 million acres was one of the lowest since 2016/17. The Delta yield, however, is estimated at a record 1,226 pounds per harvested acre.

In the Southwest, the upland cotton crop was 7 percent lower than the 2022 crop and, at nearly 3.3 million bales, it was the lowest since 1989/90. The Southwest region contributed only 27

percent of the total U.S. upland production in 2023/24 despite accounting for 60 percent of the planted area. Dry conditions for much of the growing season resulted in a second consecutive year of above-average abandonment. Following a record abandonment (73 percent) in 2022/23, this season’s loss is projected at 51 percent for the region. Meanwhile, the Southwest yield is estimated at only 526 pounds per harvested acre in 2023/24, the lowest in 20 years.

U.S. Cotton Regional Production, 2020/21 to 2023/24



Upland cotton production in the West region continued its downward trend as area moves to alternative crops. In 2023/24, upland production declined 16 percent to 349,000 bales, accounting for 3 percent of the U.S. upland cotton crop. Upland planted area in 2023/24 reached only 121,000 acres, the lowest in more than a century. The region’s yield, however, increased to 1,526 pounds per harvested acre, the second highest behind 2016/17’s record yield of 1,538 pounds per harvested acre. Although the higher yield partially offset the reduced planted area, upland production in the West is forecast at its lowest in nine decades.

Planted area of ELS cotton—grown mainly in the West—decreased 19 percent in 2023, with planted area at 147,000 acres. With a forecast yield of only 1,054 pounds per harvested acre—the lowest in 25 years—the 2023/24 ELS crop declined to 307,000 bales, 35 percent below the

previous season. California accounted for 73 percent of total ELS production in 2023/24.

U.S. Cotton Supply and Demand
2022/23 and 2023/24 est.

	<u>Unit</u>	<u>2022/23</u>	<u>2023/24</u>	<u>Change</u> <u>(%)</u>
Beg. Stocks	mil bales	4.1	4.3	4.9
Production	"	14.5	12.4	-14.1
Imports	"	0.0	0.0	0.0
Total supply	"	18.5	16.7	-9.9
Mill use	"	2.1	1.8	-14.6
Exports	"	12.8	12.3	-3.7
Total use	"	14.8	14.1	-5.2
Ending stocks	"	4.3	2.8	-34.1
Stocks-to-use	%	28.7	19.9	-8.8
Farm price	cents/lb.	84.8	77.0	-9.2

Domestic Mill Use and Consumer Demand

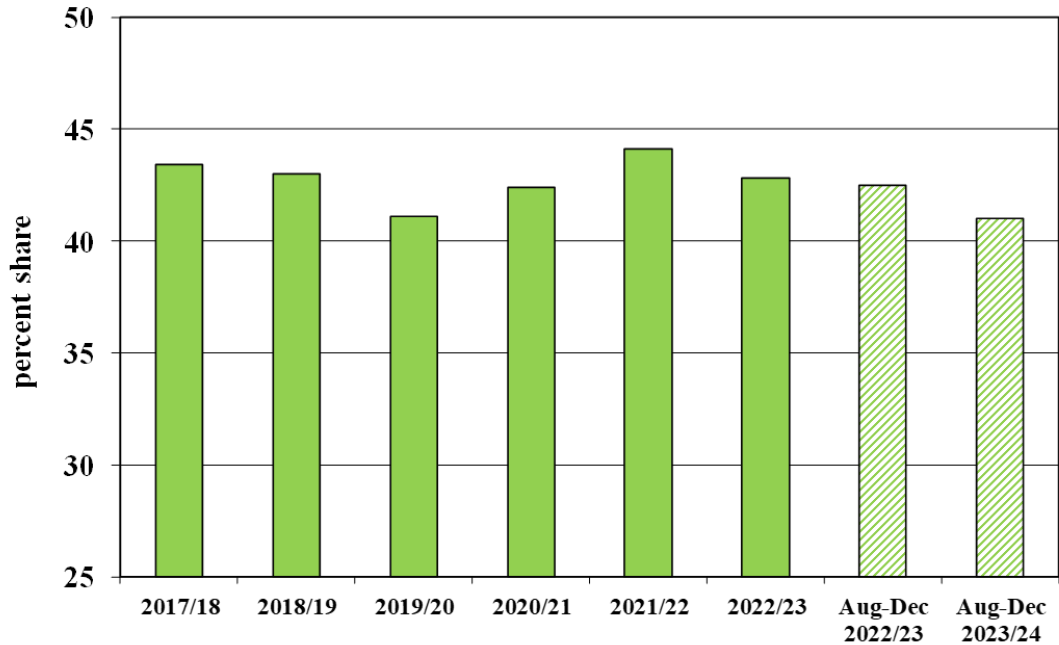
U.S. cotton mill use in 2023/24 is forecast at 1.75 million bales, a significant decrease from last season's 2.05 million bales. Mill use is expected to decline this season as a sluggish global economy and inflation effects on consumer purchasing power has reduced demand for apparel products. Although recent data indicate upstream inventory levels of semi-processed products, like yarn and fabric, have declined from relatively high levels, the economic uncertainties around the world have limited U.S. cotton textile exports and constrained mill use this season. During the first 5 months of 2023/24, U.S. cotton mill use reached only 0.7 million bales, 17 percent below a year earlier. Likewise, the pace of cotton mill use during the remaining months of this season is expected to underperform last year. U.S. cotton mill use in 2023/24 is expected to decline nearly 15 percent year-over-year to its lowest level in nearly 140 years.

U.S. consumer demand for textile and apparel products generally follows the global economy. With the world Gross Domestic Product (GDP) lower in calendar year 2023, total U.S. fiber product imports also decreased. Based on 2023 data, fiber product imports on a raw-fiber equivalent basis declined 19 percent compared with a year earlier. Cotton and synthetic products accounted for 91 percent of total imports in 2023. Similarly, total U.S. fiber product exports decreased 16 percent in 2023, with cotton products accounting for more than half of the decline.

In calendar year 2023, U.S. cotton textile and apparel imports decreased 23 percent to 15.1 million bale-equivalents—the lowest since 2001—while synthetic product imports declined 18 percent. With the decline in 2023 total fiber product imports, competitively priced synthetic

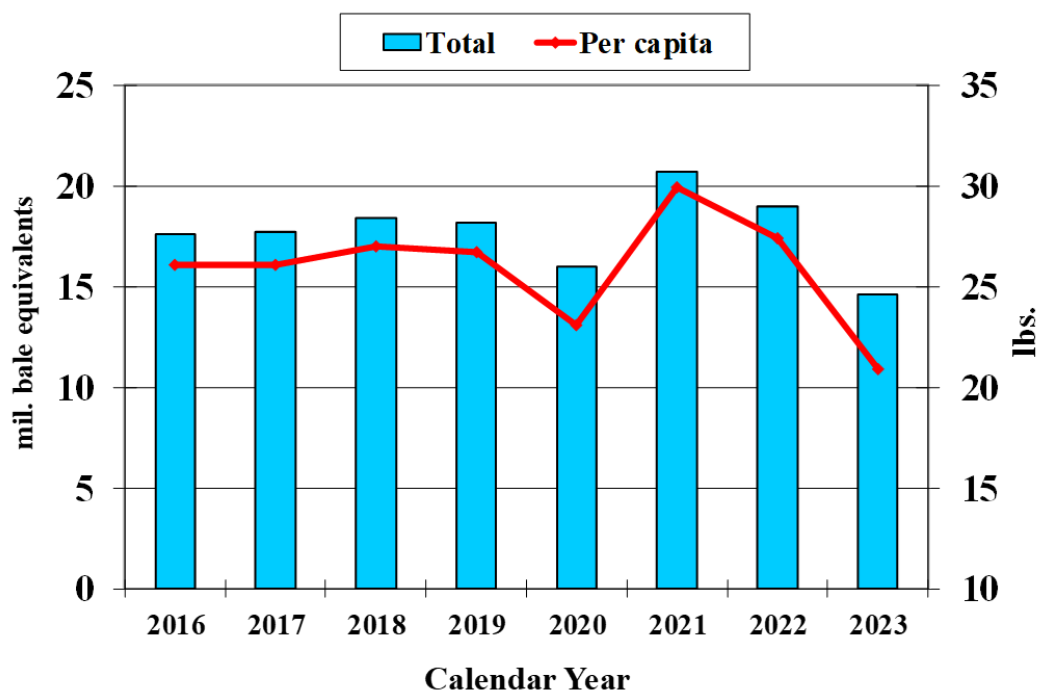
fibers (like polyester), and sustained demand for athleisure clothing (containing mostly synthetic fibers), the U.S. cotton product import share weakened from 2022. In calendar 2023, the cotton product import share reached 42 percent, compared with approximately 44 percent in 2022. In contrast, synthetic product imports accounted for 49 percent of the total in 2023, up from 48 percent in calendar 2022.

Cotton’s Share of U.S. Textile Imports, 2017/18 to Aug-Dec 2023/24 (raw-fiber-equivalent basis)



U.S. cotton product exports were 19 percent lower in calendar year 2023 at 2.4 million bale-equivalents. Meanwhile, U.S. domestic consumption of cotton (mill use plus net textile trade) in calendar 2023 is estimated to have declined to 14.6 million bale-equivalents, compared with 19.0 million bale-equivalents in 2022, and is the smallest since 1991. Similarly, U.S. per capita cotton consumption in calendar year 2023 is estimated considerably lower than the previous year at approximately 21 pounds, compared with nearly 27.5 pounds in 2022, and is the lowest in more than three decades.

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



World Cotton Outlook, 2024/25

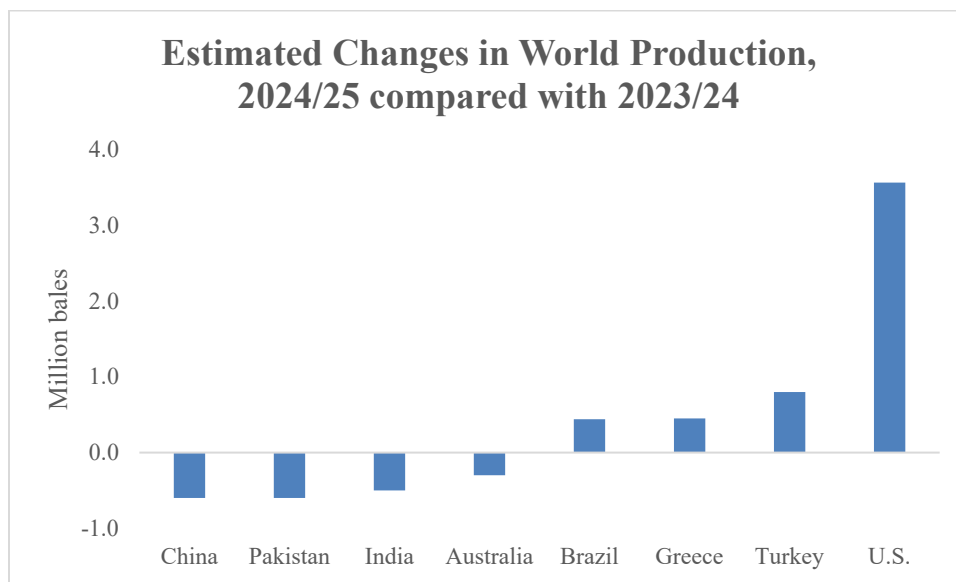
World Cotton Production, 2024/25

World cotton production is expected to rebound in 2024/25, rising 3.7 million bales and more than 3 percent to 116.5 million. With producing countries outside the United States realizing smaller—and offsetting—changes, the expected 3.6-million-bale increase in U.S. cotton production accounts for most of the global increase, and the United States is expected to regain its position as the world’s third largest cotton producer (see the [U.S. Cotton Outlook, 2024/25](#) section, below). Lower production is foreseen for China, India, Pakistan, and Australia, while output in Turkey, Greece, and Brazil is expected to rise.

China is again projected to be the world’s largest cotton producer with a 26.9-million-bale crop that is 600,000 bales below the year before. Surveys in China of farmers’ intentions suggest area in both Xinjiang and elsewhere in China could fall about 2 percent from the year before in 2024/25. Little year-to-year change is foreseen for China’s per hectare yield in 2024/25. Xinjiang accounts for about 95 percent of China’s cotton output, and yields there have been

trending upwards. Following a year-to-year decline of about 4 percent in Xinjiang’s yields in 2023/24, yields in 2024/25 are forecast at about the average of the previous 3 years.

India’s 2024/25 cotton output is expected to be 500,000 bales lower than the year before, at 24.5 million bales. Slightly less favorable relative cotton prices to date there, and local projections of lower area, suggest that area could again fall in 2024/25, and USDA is projecting about a 5-percent decline to 12.1 million hectares. India’s yields have varied significantly in recent years, driven by a series of unusual seasonal shifts in rainfall and persistent pest attacks, but using a five-year average, USDA projects India’s yield to rebound 3 percent in 2024/25 back to just about its 2022/23 level.



A smaller crop is also foreseen for Pakistan in 2024/25—down 600,000 bales—despite a projection of unchanged area. Pakistan’s yields in recent years have been the most volatile of any major cotton producer, and a 10-percent decline from the previous year is forecast for 2024/25 using a 5-year average. Area has also been variable, and has been trending downward. However, following area’s strong rebound in 2023/24 to a level close to that realized 4 years earlier—and given favorable reports of preparations underway in Pakistan for the next crop—USDA’s forecast holds Pakistan’s 2024/25 area unchanged from the year before. Output is projected slightly above 6 million bales, about equal to Pakistan’s output in the year preceding the devastating floods that occurred there in 2022/23.

With the planting of Australia’s 2024/25 Southern Hemisphere crop further in the future than is the case for any other major cotton producer, there is arguably more uncertainty in USDA’s forecast. But assuming normal weather, reservoir supplies are likely to continue to trend downward, reducing irrigated area there for the second consecutive year, and lower dryland area is likely as well. With area likely to fall more than 10 percent, Australia’s 2024/25 cotton output

is expected to decline 300,000 bales from the year before, to 4.5 million bales.

In contrast with Australia, Turkey's cotton area is expected to rise more than 10 percent in 2024/25. With more normal weather, yields are expected to rebound, also realizing a year-to-year gain in excess of 10 percent. As a result, Turkey's projected 800,000-bale increase in production is the largest USDA foresees for any producing country outside the United States, and production there is expected to reach 4 million bales.

Greece's cotton crop is expected to rise 400,000 bales in a recovery from severe weather in 2024/25. Torrential rainfall in September 2023 led to widespread abandonment of planted area in Greece in 2023/24 and reduced yields as well. Assuming normal weather, the crop is expected to return to about its 2022/23 level of 1.45 million bales.

In Brazil, planting is nearing completion for the 2024/25 crop, and expectations are for an increase from the previous year. Yields are projected to fall from the record-high achieved in 2023/24, but with a strong upward yield trend in Mato Grosso, the main producing state, and reports of a likely higher share of first crop plantings there, Brazil's country-wide yield is projected at its second highest level ever. With good yields and rising area, Brazil is again expected to realize yet another record crop, with production rising 400,000 bales to 15 million. If realized, this would mean that in 10 years Brazil has been able to raise its cotton production nearly 90 percent, enabling exports to rise about 200 percent and bringing Brazil close to the rank of the world's largest exporter.

USDA Projections for China, 2024/25

China's 2024/25 beginning stocks and production are forecast down from the previous year while consumption is forecast at roughly the same level for the third consecutive year. As the world's largest exporter of cotton fabric and one of the largest product exporters, expectations for greater global imports are expected to prevent any notable decline in consumption. From a capital and production cost point of view, China's competitive edge is expected to sustain domestic use. Imports are forecast to fall as the level of imported cotton in consignment warehouses is expected to surge in 2023/24, reducing the need for imports in 2024/25. The IMF forecasts China's GDP growth at 4.6 and 4.1 percent for calendar years 2024 and 2025, each decelerating from the previous year but above the 3 percent level witnessed in 2022.

China sold more than 4.0 million bales from government reserves in 2023/24, the largest volume since 2021/22 when more than 4.6 million bales were sold. Less than half a million bales of domestic cotton have been purchased the past 3 years as imports have served to replenish inventories. Imported cotton is expected to comprise more than 90 percent of reserves in state-owned warehouses, and the total quantity is around 4 to 5 months of consumption. Of imported

reserves, U.S. cotton is estimated to account for the majority. For more information, please see the December 2023 edition of the *Cotton: World Markets and Trade* article titled [2023 China Reserve Sales Surpass 4.0 Million Bales](#).

China Cotton Supply and Demand 2023/24 and 2024/25

Attribute	Unit	2023/24	2024/25	Change (%)
Beginning Stocks	mil. Bales	37.4	39.9	6.7
Area Harvested	mil. HA	2.9	2.8	-2.0
Production	mil. Bales	27.5	26.9	-2.2
Imports	"	12.0	10.0	-16.7
Total Supply	"	76.9	76.8	-0.1
Exports	"	0.1	0.1	0.0
Domestic Use	"	37.0	37.5	1.4
Ending Stocks	"	39.9	39.2	-1.8
State Reserve	"	14.5	14.6	0.7
Stock to Use %	%	107.6	104.3	-3.1

World Cotton Consumption, 2024/25

World cotton consumption is expected to rise to its highest level in 3 years, at 116.0 million bales. This projected 3.5-million-bale increase implies a growth rate of 3.1 percent, double the 1.6 percent average annual rate of global cotton consumption growth realized since 1960/61. Global consumption levels have stagnated since the record level of 124.2 million bales witnessed in 2020/21 with the last two marketing years having only averaged roughly 112.0 million bales. In 2024/25, more favorable economic fundamentals are expected, including lower levels for the following: U.S. interest rates, value of U.S. dollar, and global inflation. Declining levels for these factors are expected to help drive consumption above the average growth rate by generally lowering financing costs and easing importers' pressures with executing Letters of Credit.

The more pivotal factor, however, favoring increased world cotton consumption in 2024/25 is expectations for more severely depleted pipeline inventories by August 2024 relative to the previous year. Global supplies along the cotton supply chain are already down significantly compared with the previous 2 years as recent global cotton fiber consumption and cotton product import levels both indicate.

In calendar year 2023, clothing retailers significantly reduced product orders, which continues to

pressure current year 2023/24 consumption. Retailers began seeking to lower burdensome inventories starting in late 2022 and they approached the 2023 shopping season (fall and winter) with greater caution amidst a potential U.S. recession. For the largest importer of cotton products, the United States, robust levels of consumer discretionary income, low unemployment, and higher wage growth continue to support strong purchases of apparel going forward.

Like the year before, consumer demand in 2023 proved surprisingly resilient as GDP growth in the United States has exceeded expectations. In its January World Economic Outlook Projections, the IMF adjusted world GDP growth up for 2023 and 2024; growth for 2025 is expected at 3.2 percent compared with 3.1 percent in the previous year. The European Union and other advanced economies are expected to mostly contribute to global growth whereas the rate of growth is expected to slow in the United States and China.

Larger global supplies are also expected to boost consumption. The sum of beginning stocks and production are projected at their highest level since 2020/21 at over 200.0 million bales. Greater cotton supplies coupled with more stable operating costs for spinners, including financing and energy, are also supportive. Available cotton supplies relative to consumption have been suppressed since early 2022 with the exuberant rally in energy (e.g., natural gas, diesel, and coal) and acceleration of U.S. interest rates curbing consumption growth. Since 2022, the lagged effects from significant price swings (including cotton) and rising interest rates have pressured consumption in key consuming markets. However, the most recent IMF World Economic Outlook forecasts fuel prices and interest rates in 2024 and 2025 to decline in major economies from their previous respective year and significantly below 2022.

Potential negative factors are noteworthy when projecting 2024/25 consumption growth, including the pace and level to which global interest rates fall, especially in the United States. Other concerns include the ongoing conflicts in Ukraine and the Middle East, which contribute to a more risk averse approach. Concerns with the world's two largest economies also underscore a cautious approach. This includes concerns about China's property sector (as highlighted by the IMF) and sustained U.S. interest rates inducing a potentially mild recession. Moreover, the ongoing malaise of economic activity in the European Union and United Kingdom also present an uncertain outlook for future product purchases. Along with China and the United States, Europe is among the largest purchasers of cotton products.

2024/25 World Trade and Stocks

World cotton trade is expected to rise further in 2024/25 as China's imports—while lower—remain relatively high, and consumption rises in other importing countries, supporting their import demand. Higher production in several exporting countries, including the two largest—the United States and Brazil—will meet this increased import demand, and world trade is expected

to rise nearly 6 percent to 45.3 million bales.

World ending stocks of cotton are expected to continue rising in absolute terms in 2024/25 but decline slightly as a share of global consumption. At 84.6 million bales, stocks are forecast up 900,000 bales, but down 1.5 percentage points as a share of consumption, at 73 percent. With stocks tighter relative to consumption, prices in the United States and the world are expected to rise, and the A Index is forecast to increase about 3 cents to 97.5 cents per pound.

World Cotton Supply and Demand 2023/24 and 2024/25

Attribute	Unit	2023/24	2024/25	Change (%)
Beginning Stocks	mil. Bales	83.0	83.7	0.9
Area Harvested	mil. HA	31.7	32.0	1.1
Production	mil. Bales	112.8	116.5	3.3
Imports	"	42.9	45.3	5.7
Total Supply	"	238.7	245.5	2.9
Exports	"	42.9	45.3	5.7
Domestic Use	"	112.5	116.0	3.1
Ending Stocks	"	83.7	84.6	1.1
Stock to Use %	%	74.4	72.9	-1.5

U.S. Cotton Outlook, 2024/25

Area, Production, and Supply

The early USDA projection for 2024 U.S. cotton planted area is 11.0 million acres, 7.5 percent above 2023's 10.2 million acres but still the second lowest since 2016. Historically, the relationship between expected harvest prices for cotton relative to corn and soybeans has played an important role in the cotton area planted. Cotton harvest futures prices from mid-January through early February 2024 averaged 3.5 cents (4 percent) below price expectations in early 2023. However, 2024 harvest prices for the same period for corn were nearly 20 percent lower while soybean prices were approximately 13 percent lower. Consequently, these relative crop prices indicate that cotton is more competitive this year compared with alternative crops.

Planted acreage decisions this spring likely will be influenced by additional factors including the cotton farmers' experiences during the previous season, insurance reference prices, fixed cost investments, and the soil moisture conditions heading into planting season. Cotton yields per harvested acre in 2023 were above or near the previous season's level in three of the four Cotton Belt regions, with the Delta experiencing a record yield in 2023. On the other hand, drought

conditions in the Southwest led to a second consecutive year in 2023 of above-average abandonment (51 percent) in the region and reduced production prospects. However, producers' financial losses were somewhat limited last season despite crop insurance reference prices that were considerably lower than in 2022. For 2024, the cotton reference price is slightly lower at approximately 82 cents per pound. Meanwhile, better moisture conditions across the Cotton Belt, particularly in the Southwest region, have improved drought conditions as the 2024 spring planting season approaches. Concerns about weather conditions and rainfall during the growing season, however, provide some additional uncertainty.

**U.S. Cotton Area, Yield, and Production
2023/24 and 2024/25 proj.**

	Unit	2023/24	2024/25	<u>Change</u> (%)
Planted area	mil. acres	10.23	11.00	7.5
Harvested area	"	7.07	9.29	31.4
Abandonment rate	%	30.9	15.5	-15.4
Yield/harvested acre	lbs./acre	845	827	-2.1
Production	mil. bales	12.43	16.00	28.7

USDA's first survey of producer planting intentions—*Prospective Plantings*—will be conducted in early March and published on March 28, 2024. Until then, for the purposes of this analysis, 2024 cotton plantings of 11.0 million acres (+7.5 percent) are estimated to result in harvested area of nearly 9.3 million acres, approximately 31 percent above 2023. The projected national abandonment rate of 15.5 percent is based on 10-year regional averages, with the 2024 Southwest abandonment rate estimated below the 10-year average of 32 percent. Southwest abandonment rates are highly variable demonstrated by 2021's rate of 12 percent followed by 2022's record of 73 percent. Conditions later this spring will have a considerable impact on cotton plantings and the U.S. crop size. The latest NOAA seasonal outlook for the Southwest indicates that drought conditions are forecast to be much improved in 2024 over the region's cotton growing area at least through May.

USDA is forecasting a national average yield—based on 5-year regional average yields—of 827 pounds per harvested acre, compared with the 2023 yield of 845 pounds. The 2024 U.S. cotton crop is projected at 16.0 million bales, compared with 2023's estimate of approximately 12.4 million bales. The higher production is attributable to a 31-percent increase in expected harvested area that more than offsets a 2-percent reduction in yield, as a larger share of lower-yielding cotton is forecast to be harvested in the Southwest in 2024. Cotton crop expectations similar to last season are anticipated for each of the Cotton Belt regions, except for the Southwest, where 2024 cotton production is forecast to more than double in size. Based on lower U.S. carry-in stocks of 2.8 million bales for 2024/25 and the larger production, a total supply of

18.8 million bales would be approximately 12.5 percent larger than the previous season and the largest in 3 years.

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

U.S. cotton mill use is projected at 1.75 million bales in 2024/25, unchanged from 2023/24. Although global cotton mill use is expected to expand above the long-run annual growth rate, U.S. mill use expansion is likely to remain limited compared with many of the cotton spinning countries in 2024/25. Increased competition from foreign manufacturing of both cotton and synthetic fibers—such as polyester—is expected to keep U.S. cotton mill use at its lowest level since the 1880s. U.S. cotton mill use is projected to account for only 11 percent of total U.S. cotton demand in 2024/25, as opportunities for increased U.S. raw cotton exports exceed those for a considerable rebound in semi-processed textile and apparel product exports.

U.S. Cotton Supply and Demand 2023/24 and 2024/25 est.

Attribute	Unit	2023/24	2024/25	Change (%)
Beginning Stocks	mil. Bales	4.25	2.8	-34.1
Area Harvested	mil. HA	2.86	3.8	31.4
Production	mil. Bales	12.43	16.0	28.7
Imports	"	0.01	0.0	0.0
Total Supply	"	16.69	18.8	12.6
Exports	"	12.30	13.8	11.8
Use	"	1.75	1.8	0.0
Total Use	"	14.05	15.5	10.3
Ending Stocks	"	2.80	3.5	25.0
Stock to Use %	%	19.9	22.6	2.7
Farm Price	cents/lb.	77.0	80.0	3.9

U.S. cotton exports are projected to rise 12 percent in 2024/25 to nearly 13.8 million bales, as expectations for increased global cotton mill use to replenish pipeline inventories are forecast. Likewise, world cotton trade is projected higher in 2024/25, and many of the major producing/exporting countries will likely benefit. A larger U.S. cotton crop in 2024/25 is also expected to support the highest exports in 3 years as the United States remains the leading cotton exporter once again in 2024/25. The U.S. share of world trade is expected to rise above 30 percent in 2024/25 but remain below the 5-year average (33.5 percent) due to persistent competition from other foreign cotton producers.

U.S. 2024/25 cotton ending stocks are forecast to increase considerably (25 percent) from the relatively low level in 2023/24 as crop expectations above the previous 2 years are projected. At 3.5 million bales, 2024/25 ending stocks are projected 700,000 bales above 2023/24, but below the preceding two seasons. Meanwhile, the stocks-to-use ratio is expected to rise slightly in 2024/25 to approximately 22.5 percent, compared with the 5-year average of 26 percent. Based on the initial U.S. and global cotton supply and demand projections for 2024/25, the U.S. average price received by upland cotton producers is expected at 80 cents per pound, compared with the current 2023/24 forecast of 77 cents.

Appendix: China Cotton Policy and USDA Assumptions

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

2020

- Out-of-quota duty, TRQ, and duty-free processing imports same as previous year.
- Imports of foreign cotton by State Reserve.
- Additional access provided; 400,000 MT issued.

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 foreign cotton by State Reserve.
- Additional access provided; 700,000 MT issued.

2022

- Out-of-quota duty, TRQ, and duty-free processing imports same as previous year.
- Imports of foreign cotton by State Reserve.
- Additional access provided; 400,000 MT issued.

2023

- Out-of-quota duty, TRQ, and duty-free processing imports same as previous year.
- Imports of foreign cotton by State Reserve.
- Additional access provided; 750,000 MT 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).

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).

2020

- Sales of 2012 and 2013 stocks.

- 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 1.2 million MT, 97 percent domestic.
- No purchases of domestic cotton.
- 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.

2020/21-2021/22

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

2022/23

- No major changes.

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.

Appendix: U.S. Farm Policy

The Agriculture Improvement Act of 2018 (2018 Farm Bill) became law effective December 20, 2018, and was slated to expire September 30, 2023. However, a one-year extension was signed by the President on November 16, 2023, authorizing current provisions through September 30, 2024. At this time, it is unclear what changes may be made to U.S. farm policies in general or as they specifically relate to upland and ELS cotton in a subsequent farm bill. Below is background and discussion of current farm policies.

In general, many of the provisions of the 2014 Farm Bill such as Marketing Assistance Loans and the ARC/PLC programs were carried over to the 2018 Farm Bill, with some upward adjustments to loan rates for some crops and an allowance for Average Revenue Coverage and Price Loss Coverage (ARC/PLC) reference prices to rise as much as 15% above the statutory reference prices. Also, producers were required to allocate “generic” base acres (former cotton base acres before 2014) to seed cotton base acres in an amount equal to the greater of 80% of their generic base acres (up to 100% in some cases), or the average number of seed cotton acres planted on the farm during 2009-12, not to exceed total generic base acres on the farm.

For cotton, most of the farm program provisions were unchanged or modestly adjusted from the 2014 Farm Bill, with the noteworthy exception of incorporating the “seed cotton” (unginned cotton containing both lint and seed) ARC/PLC provisions from the Bipartisan Budget Act of 2018 (BBA), which made seed cotton eligible for ARC/PLC for the 2018/19 crop. The addition of seed cotton occurred after cotton lint was removed as a “covered” commodity in the 2014 Farm Bill following a successful World Trade Organization challenge of the U.S. cotton program by Brazil. Under the 2018 Farm Bill, the upland cotton marketing assistance loan rate remains between 45 and 52 cents/lb., the ELS rate was raised from \$0.7977/lb. to \$0.95/lb., and seed cotton loan rates correspond with their respective upland and ELS loan rates. The Economic Adjustment Assistance Program for domestic users of upland cotton (“EAAP”) was unchanged, aside from being renamed as the Economic Adjustment Assistance for Textile Mills program (“EAATM”). The Extra Long Staple (ELS) Competitiveness payment program remained in place but several parameters potentially affecting payments were changed.

Seed Cotton ARC/PLC Provisions

When cotton lint was removed as a covered crop in the 2014 Farm Bill, cotton base acres were eliminated and were replaced by “generic” base acres. These generic base acres, on an annual basis, could be eligible for payments based on the proportion of other covered crops planted on a farm with generic base acres.

The 2018 BBA applied only to the 2018/19 crop, but the 2018 Farm Bill applies to the 2019-24

crops (with the one-year extension). Under the BBA, owners of generic base had several options to convert generic base into seed cotton or other covered commodity base acreage, either to 80-100% seed cotton base depending on cotton planting history during 2009-12 or to the proportion of all covered crops planted during that time period. If a producer planted no covered commodities since 2009, all generic base would become unassigned and ineligible for ARC/PLC payments.

The seed cotton ARC and PLC programs will operate with the same general parameters as they have with other covered crops during the 2014 Farm Bill. Seed cotton has a reference price of \$0.367/lb., and the effective price is the higher of \$0.25/lb. or the weighted average price of cotton lint and cottonseed. Payments equal the payment rate (if the effective price is lower than the reference price), times the payment yield, times 85% of the seed cotton base acres. The payment yield, by default, is the Counter-Cyclical Payment yield under previous legislation for lint cotton times 2.4, and the option to update yields also exists under the same conditions as for other covered commodities under the 2018 Farm Bill.

Marketing Assistance Loans

There are different provisions for upland cotton, ELS, and seed cotton marketing assistance loans (MALs) in the 2018 Farm Bill. The upland cotton and ELS MALs remain nonrecourse, meaning that producers are able to forfeit the cotton as full repayment of the MAL, but only upland cotton is eligible for Marketing Loan Benefits. The upland cotton loan rate remains between \$0.45/lb. and \$0.52/lb., based on the simple average of the preceding two crop year's Adjusted World Price (AWP), but with the new provision that the loan rate can be no less than 98% of the previous year's loan rate. The ELS loan rate, as with a number of other crops, had its loan rate raised, in this case from \$0.7977/lb. to \$0.95/lb. Seed cotton loans (unrelated to the ARC/PLC provisions discussed above) are recourse loans, requiring full repayment with interest. The loan rate for seed cotton is the same for upland cotton and ELS cotton, respectively, depending on the variety of the cotton.

Other Cotton Provisions

The other main cotton programs that were continued, with some modification in one case, are the Economic Adjustment Assistance to Textile Mills ("EAATM") program, the ELS Competitiveness Payment Program, and the upland Special Import Quota.

The EAATM program, established in 2008 under a different name, provides a fixed payment of \$0.03/lb. to domestic users (e.g., mills) of upland cotton. The payments are to be used for capital improvements such as purchasing or improving equipment, machinery, and structures.

The ELS Competitive Payment Program is designed to make payments to domestic users or exporters of ELS when, for four consecutive weeks, a) the lowest foreign price quote for a competing variety is lower than the U.S. price quote and, b) the low foreign price quote is less than a certain percentage of the U.S. loan rate (previously 134% and changed to 113% in the 2018 Farm Act). The change to 113% is offsetting to the increased loan rate but perhaps not completely so based on an examination of historical price data. Finally, a special import quota, is continued and unchanged from prior farm bills.