The Economic Outlook

For U.S. Cotton 2023

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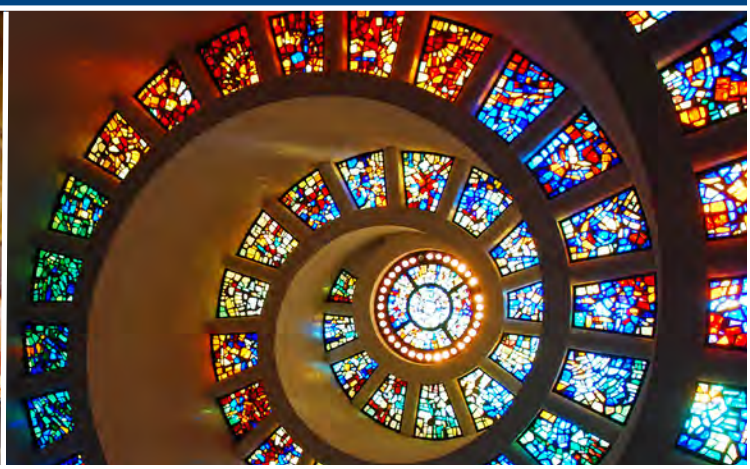


Summary

This past year can be characterized as a year with significant uncertainty and volatility in the global economy and the world cotton market. The U.S. cotton industry continues to navigate an environment characterized by increased production costs, slumping consumer demand, and supply chain disruptions.

Modest economic growth is projected for the next two years with the International Monetary Fund (IMF) calling for global growth rates of 2.9% in 2023 and 3.1% in 2024. The projected growth represents a slowdown from the IMF estimates of 6.2% expansion in 2021 and 3.4% in 2022. The latest IMF projections take a similar tone regarding U.S. GDP with a 1.4% growth rate in 2023, followed by a slower growth rate of 1.0% in 2024. As with any projections, there are uncertainties and unknowns that can alter the eventual outcome. Current economic projections for the U.S. and global economies should be viewed with caution given the continued impacts of tighter monetary policy, high inflation, the Russia-Ukraine war, potential for severe COVID-19 health impacts in China, geopolitical tensions, and slower economic growth.

With this report, National Cotton Council (NCC) staff hopes to present a thorough review of the current economic landscape and the prospects for the coming year.

U.S. Supply and Demand

- For the 2022/23 marketing year, U.S. growers planted 13.8 million acres of cotton, an increase of 22.7% from the previous year due to higher prices. Overall U.S. abandonment was 45.9%, as compared to 8.4% in 2021 and is the highest level on record. Due to extreme drought conditions in the Southwest, harvested acreage of 7.4 million acres was at the lowest level since 1983. U.S. production of 14.7 million bales was 2.8 million bales lower than in 2021/22.

- The reduced U.S. supply in 2022/23 along with weaker demand resulted in a lower export projection for 2022/23 as compared to the previous year. U.S. export sales were lower during the first half of the 2022/23 marketing year as compared to prior years.

- As compared to the average level of export sales commitments at the same time in 2017-2021, the current level of 9.9 million bales is 3.0 million bales lower. However, current sales as a percentage of total exports are 83.9% (9.9/11.8) as compared to the 2017-2021 average of 82.7%. Of the 9.9 million bales, 7.5 million bales were sold during the 2021/2022 marketing year (2.5 million carryover sales from the 2021/22 marketing year and 5.1 million forward sales made during the 2021/22 marketing year). Since August 1, 2022, net export sales commitments have only increased by 2.2 million bales.

- China's current U.S. sales commitment level of 2.1 million bales is 1.8 million bales lower than at the same time last year. In 2022, COVID-19 outbreaks and restrictions in China significantly reduced consumption.

- Pakistan is currently the 2nd largest export customer of U.S. cotton with 1.9 million bales in sales commitments. However, due to low foreign currency reserves in Pakistan, their ability to purchase imported goods is limited and their ability to fulfill current export sales commitments is unclear. As of January 26, 2023, 1.2 million bales of U.S. cotton had been sold to Pakistan but not shipped.

- Reductions in foreign reserves are also evident in countries such as Bangladesh, leading to concerns that that country could also face challenges when importing cotton. However, as compared to Pakistan, the potential number of bales at risk is lower (338 thousand bales currently sold but not shipped).

- U.S. mills are expected to consume 2.2 million bales during the 2022/23 marketing year as compared to 2.6 million bales in 2021/22. For the 2023/24 marketing year, U.S. mill use is projected to increase to 2.3 million. U.S. mills continue to be important and consistent customers of U.S. cotton.

- Looking ahead to the 2023/24 marketing year, production costs remain elevated and are only slightly lower than a year ago. According to USDA's Economic Research Service, U.S. cotton production costs increased by $161 per acre from 2018 to 2022 – an increase of 20 cents per pound based on an average yield of 800 pounds per acre. Cotton producers will face difficult economic conditions in 2023 with lower cotton prices and high production costs.

- Cotton harvest-time futures prices in early February 2023 are 16.5% lower than a year ago, while prices of most competing commodities are relatively unchanged from a year ago. The cotton-to-corn and cotton-to-soybean price ratios are at the lowest level since the 2009 marketing year. Higher wheat prices have also resulted in a large increase in U.S. winter wheat plantings for the 2023 harvest season.

- The current economic signals are reflected in the 2023 survey results as many responses indicated a shift away from cotton to other competing commodities. For the 2023/24 marketing year, U.S. growers intend to plant 11.4 million acres, which is 17.0% lower than in 2022.

- To estimate U.S. production for 2023/24, the 5-year average (2018-2022) abandonment rate and yield was used for most states. In the Southwest, adjustments were applied to the 5-year average values to account for the 2022 experience as well as current drought conditions. For 2023/24, U.S. harvested area is estimated to be 8.8 million acres with an overall abandonment rate of 22.6%. 2023/24 U.S. production is estimated to be 15.7 million bales with an average yield of 853 pounds per acre, which includes 15.2 million upland bales and 466,000 ELS bales.

U.S. Supply & Demand	*2022/23*	*2023/24*
Planted (million acres)	13.8	11.4
Abandonment	45.9%	22.6%
Harvested (million acres)	7.4	8.8
Lint Yield (lbs/harv acre)	957	853
Lint Production (million bales)	14.7	15.7
Cottonseed Production (million tons)	4.5	4.8
U.S. Mill Use (million bales)	2.2	2.3
U.S. Exports (million bales)	11.8	12.5
U.S. Ending Stocks (million bales)	4.4	5.3

- For the 2023/24 marketing year, a projected increase in world consumption along with a larger U.S. supply results in a larger U.S. export projection as compared to 2022/23.

- For the 2022/23 marketing year, U.S. cottonseed production was estimated to be 4.5 million tons, down 0.9 million tons from the previous year. U.S. cottonseed production is projected to increase to 4.8 million tons for the 2023/24 marketing year.

World Supply and Demand

- For the 2022/23 marketing year, world area declined by 1.2% to 78.9 million acres. World production was estimated to decline by 319 thousand bales to 115.4 million for the 2022/23 marketing year.

    - In 2022, China's acreage declined relative to 2021, but production increased by 1.2 million bales due to a record yield.

    - Production also increased in India, Brazil, and Turkey in 2022.

    - While the U.S. had the largest decline of 2.8 million bales in 2022, Pakistan also had a large reduction of 2.3 million bales mostly due to flooding and abandoned acres. Pakistan's 2022 production of 3.7 million bales was at the lowest level since 1983. Over the past four years, Pakistan's production has continued to trend downward. From 2019-2022, Pakistan's average production was 5.1 million bales. From 2008-2018, Pakistan's average production was 8.8 million bales. With a strong textile sector, Pakistan has increased their reliance on imported cotton.

- For the 2023/24 marketing year, world harvested area is projected to grow by 2.2% to 80.6 million acres. World production is projected to increase slightly to 115.9 million bales. Most major cotton producing countries except China and Turkey are expected to increase production in 2023.

    - The large projected decline for China is due to a lower yield as compared to 2022 and a slight decline in acreage. In Turkey, lower cotton acreage is expected due to relative returns of competing commodities. An increase in 2023 acreage is expected for Brazil and India resulting in higher production as compared to 2022.

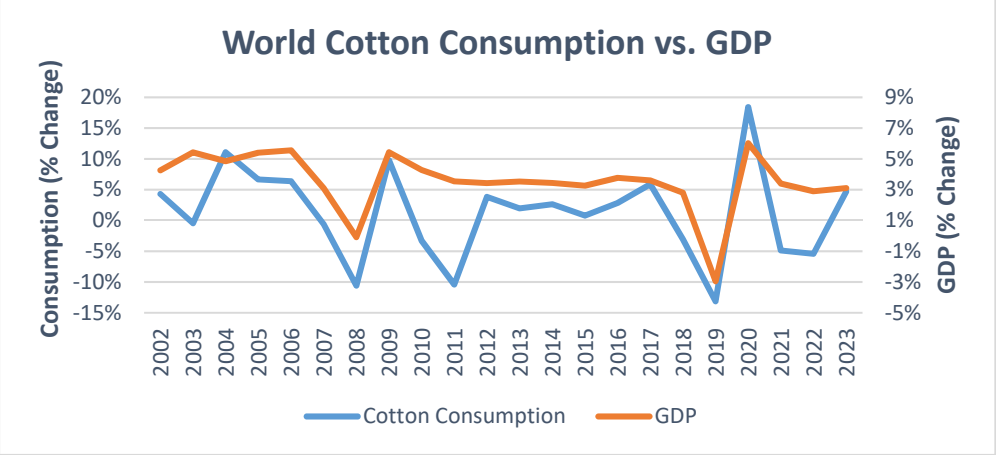
World Production (million bales)

	2021/22	2021/22 Change	2022/23	2022/23 Change	2023/24	2023/24 Change
U.S.	17.5	+2.9	14.7	-2.8	15.7	+1.0
Australia	5.8	+3.0	5.0	-0.8	5.1	+0.1
Brazil	11.7	+0.9	13.3	+1.6	13.5	+0.2
China	26.8	-2.8	28.0	+1.2	25.8	-2.2
India	24.4	-3.2	26.5	+2.5	27.4	+0.9
Pakistan	6.0	+1.5	3.7	-2.3	4.6	+0.9
Turkey	3.8	+0.9	4.9	+1.1	4.0	-0.9
World	115.7	+4.2	115.4	-0.3	115.9	+0.5

- For the 2022/23 marketing year, world consumption is projected to decline by 6.6 million bales to 110.9 million based on the January 2023 USDA estimate. Several factors have contributed to the decline in cotton demand including declining global economic conditions, high inflation levels, COVID-19 lockdowns in China, low foreign currency reserves, letter of credit issues, lower profit margins for spinning mills, reduced yarn orders, and weaker cotton demand.

- Overall, the outlook for world cotton demand for the 2023/24 marketing year takes on a more positive tone with the expectation of improved global economic conditions. For the 2023/24 marketing year, world consumption is projected to increase by 4.7% to 116.1 million bales. The removal of COVID-19 restrictions in China should provide a boost to cotton consumption in 2023. IMF has projected an increase in China's growth rate from 3.0% in 2022 to 5.2% in 2023.

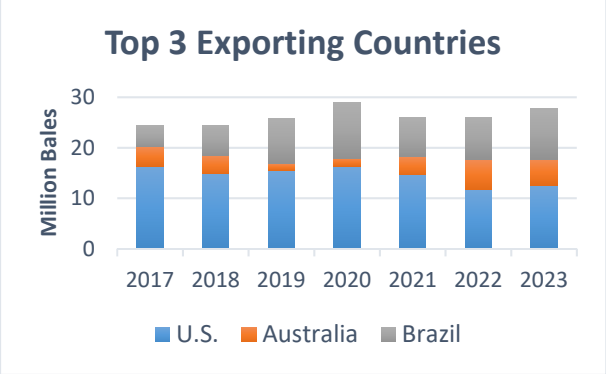
- Historical data shows a strong correlation between cotton consumption and economic growth, or GDP. Historical data also shows a large recovery in consumption in the year following a large decline. With the expectation of improving economic conditions and lower inflation in the latter half of 2023, cotton consumption is projected to increase in most cotton consuming countries during the 2023/24 marketing year.

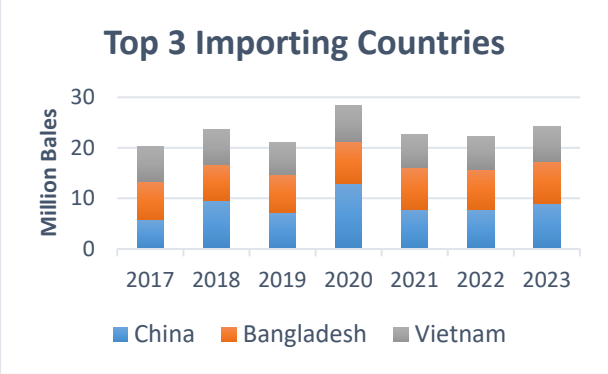


*Adjusted to align GDP by calendar year and consumption by marketing year (ex. 2023 GDP & 2022/23 Consumption).

- For the 2022/23 marketing year, world cotton trade dropped to 41.5 million bales. The share of 2022/23 world exports for the top three exporting countries would be 28.5% for the U.S., 20.0% for Brazil, and 14.2% for Australia. From 2017-2021, the average U.S. market share of world exports was 36.6%. Lower U.S. supplies combined with increased production in Brazil has reduced the U.S. market share.

- For the 2023/24 marketing year, world trade is projected to increase to 44.2 million bales. The share of 2023/24 world exports for the top three exporting countries would be 28.3% for the U.S., 22.8% for Brazil, and 11.8% for Australia.





- With world production exceeding consumption in the 2022/23 marketing year, ending stocks are projected to increase by 4.8 million bales to 90.1 million, resulting in a stocks-to-use ratio of 81.3%. For the 2023/24 marketing year, higher world consumption and trade and only a slight increase in production results in a decline in ending stocks to 89.9 million bales.

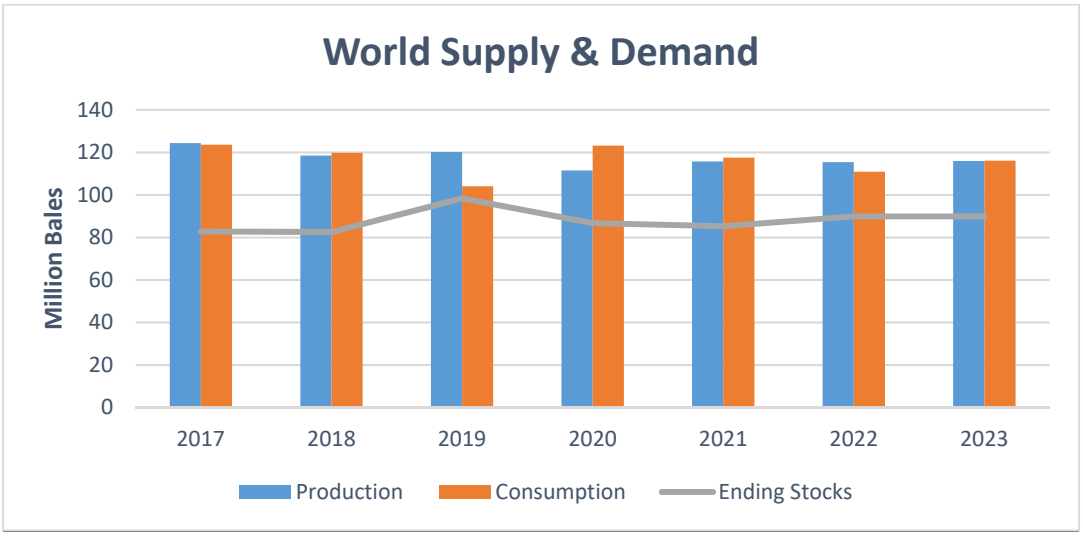


Table 1 - Balance Sheet for Selected Countries & Regions

World	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	85,165	77,505	79,845	78,864	80,602
Yield (Pounds/Acre)	677	690	696	702	690
Production (Thou Bales)	120,163	111,489	115,715	115,396	115,936
Trade (Thou Bales)	40,703	48,693	42,889	41,626	44,157
Mill Use (Thou Bales)	104,064	123,188	117,501	110,853	116,063
Ending Stocks (Thou Bales)	98,406	86,733	85,340	90,133	89,913
United States	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	11,498	8,216	10,272	7,440	8,836
Yield (Pounds/Acre)	831	853	819	947	853
Production (Thou Bales)	19,913	14,608	17,523	14,680	15,703
Net Exports (Thou Bales)	15,509	16,350	14,617	11,795	12,512
Mill Use (Thou Bales)	2,150	2,400	2,550	2,200	2,300
Ending Stocks (Thou Bales)	7,250	3,150	3,750	4,400	5,290
Australia	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	148	680	1,483	1,236	1,273
Yield (Pounds/Acre)	2,023	1,978	1,862	1,943	1,927
Production (Thou Bales)	625	2,800	5,750	5,000	5,110
Net Exports (Thou Bales)	1,359	1,581	3,577	5,900	5,200
Mill Use (Thou Bales)	10	10	10	10	35
Ending Stocks (Thou Bales)	1,198	2,507	4,860	4,140	4,015
Bangladesh	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	111	109	111	114	114
Yield (Pounds/Acre)	613	649	652	655	653
Production (Thou Bales)	142	147	151	155	155
Net Imports (Thou Bales)	7,500	8,300	8,200	8,000	8,367
Mill Use (Thou Bales)	6,900	8,500	8,500	8,200	8,500
Ending Stocks (Thou Bales)	2,515	2,452	2,293	2,238	2,250
Brazil	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	4,114	3,385	3,954	4,028	4,205
Yield (Pounds/Acre)	1,608	1,534	1,423	1,585	1,538
Production (Thou Bales)	13,780	10,820	11,720	13,300	13,473
Net Exports (Thou Bales)	8,932	11,002	7,703	8,285	10,024
Mill Use (Thou Bales)	2,700	3,100	3,300	3,200	3,300
Ending Stocks (Thou Bales)	14,404	11,119	11,836	13,651	13,800
China	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	8,401	7,907	7,660	7,413	7,334
Yield (Pounds/Acre)	1,568	1,797	1,679	1,813	1,691
Production (Thou Bales)	27,450	29,600	26,800	28,000	25,844
Net Imports (Thou Bales)	6,980	12,850	7,720	7,625	8,950
Mill Use (Thou Bales)	34,000	41,000	35,000	35,500	36,800
Ending Stocks (Thou Bales)	36,344	37,794	37,314	37,439	35,433
India	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	33,111	32,830	30,023	32,123	32,765
Yield (Pounds/Acre)	413	404	390	396	401
Production (Thou Bales)	28,500	27,600	24,400	26,500	27,354
Net Exports (Thou Bales)	920	5,345	2,743	1,400	3,050
Mill Use (Thou Bales)	20,500	26,000	25,000	22,500	23,750
Ending Stocks (Thou Bales)	15,684	11,939	8,596	11,196	11,750

Table 1 – Selected Countries and Regions (Continued)

Indonesia	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	5	5	5	5	5
Yield (Pounds/Acre)	291	194	194	194	194
Production (Thou Bales)	3	2	2	2	2
Net Imports (Thou Bales)	2,508	2,301	2,564	2,195	2,489
Mill Use (Thou Bales)	2,400	2,450	2,600	2,200	2,500
Ending Stocks (Thou Bales)	643	496	462	459	450
Mexico	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	556	358	381	494	445
Yield (Pounds/Acre)	1,355	1,366	1,539	1,360	1,402
Production (Thou Bales)	1,570	1,020	1,220	1,400	1,299
Net Imports (Thou Bales)	-70	440	556	500	792
Mill Use (Thou Bales)	1,475	1,700	1,850	1,800	1,850
Ending Stocks (Thou Bales)	709	454	370	109	325
Pakistan	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	6,054	5,436	4,942	4,448	4,359
Yield (Pounds/Acre)	492	397	583	399	503
Production (Thou Bales)	6,200	4,500	6,000	3,700	4,564
Net Imports (Thou Bales)	3,945	5,375	4,450	4,975	5,346
Mill Use (Thou Bales)	9,500	10,800	10,700	9,000	9,750
Ending Stocks (Thou Bales)	3,115	2,165	1,890	1,540	1,675
Turkey	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	1,408	865	1,112	1,371	1,150
Yield (Pounds/Acre)	1,176	1,610	1,640	1,715	1,655
Production (Thou Bales)	3,450	2,900	3,800	4,900	3,965
Net Imports (Thou Bales)	4,222	4,742	4,957	3,600	4,170
Mill Use (Thou Bales)	6,600	7,700	8,700	8,000	8,400
Ending Stocks (Thou Bales)	2,766	2,708	2,765	3,265	3,000
Uzbekistan	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	2,595	2,619	2,619	2,644	2,512
Yield (Pounds/Acre)	451	583	495	490	501
Production (Thou Bales)	2,440	3,180	2,700	2,700	2,621
Net Exports (Thou Bales)	441	425	15	25	-15
Mill Use (Thou Bales)	2,260	3,120	3,140	2,750	2,950
Ending Stocks (Thou Bales)	2,484	2,119	1,664	1,589	1,275
Vietnam	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	2	2	2	2	2
Yield (Pounds/Acre)	583	583	583	583	583
Production (Thou Bales)	3	3	3	3	3
Net Imports (Thou Bales)	6,481	7,288	6,631	6,400	6,822
Mill Use (Thou Bales)	6,600	7,300	6,700	6,400	6,800
Ending Stocks (Thou Bales)	1,097	1,088	1,022	1,025	1,050
West Africa	**19/20**	**20/21**	**21/22**	**22/23**	**23/24**
Harvested Area (Thou Acres)	7,670	5,923	7,680	7,710	7,864
Yield (Pounds/Acre)	363	392	374	337	365
Production (Thou Bales)	5,802	4,835	5,980	5,418	5,974
Net Exports (Thou Bales)	4,622	5,489	6,014	5,194	5,406
Mill Use (Thou Bales)	103	103	103	103	103
Ending Stocks (Thou Bales)	2,500	1,743	1,614	1,735	2,200

U.S. and World Economy

In the early weeks of 2023, the short-term outlook for economic growth has improved but concerns remain as high inflation and the Russia-Ukraine war continue to weigh on economic activity.

According to the International Monetary Fund (IMF) January 2023 *World Economic Outlook*, some of the same factors weighing on world economic activity in 2022 will continue to impact global economic growth in 2023. However, despite the headwinds in 2022, third quarter real GDP was stronger than expected in several economies, including the United States.

In the fourth quarter of 2022, U.S. growth was stronger than expected but growth in other major economies slowed. In China, COVID-19 outbreaks and restrictions reduced economic activity in the fourth quarter, but a relaxation of COVID-19 restrictions at the end of the year should provide a boost to economic activity in 2023. As noted by IMF, tighter monetary policy has resulted in a reduction in demand and lower inflation, but the full impacts will likely not be apparent until 2024.

The Wells Fargo *2023 Outlook* report also included a similar assessment and outlook for the global economy. Although the U.S. economy demonstrated some resilience in the last quarter of 2022 and inflation slowed, the path toward economic recovery is filled with challenges. Based on the Wells Fargo Securities January 2023 *Monthly Outlook*, a U.S. recession is expected in the first half of 2023 along with a continued slowdown in world economic activity. The Federal Reserve is expected to continue to increase interest rates in order to reach the target range for the federal funds rate of 5.00% - 5.25% and the rate is expected to remain at that level throughout 2023.

The latest survey of consumer attitudes reports the highest level of consumer confidence since the record low in June 2022. As measured by the Reuters/University of Michigan's Consumer Sentiment Index, although consumer sentiment remains well below 2021 levels, consumers' negative attitudes have improved a bit with slower inflation. The index increased in January 2023 to 64.6, but us still slightly below the January 2022 level of 67.2 (Figure 1). During the first half of 2022, the average index value was 62.6, dropped to a low of 50.0 in June, and averaged 57.5 throughout the second half of 2022. The index is designed to gauge the attitudes of the American consumer with regards to the economy.

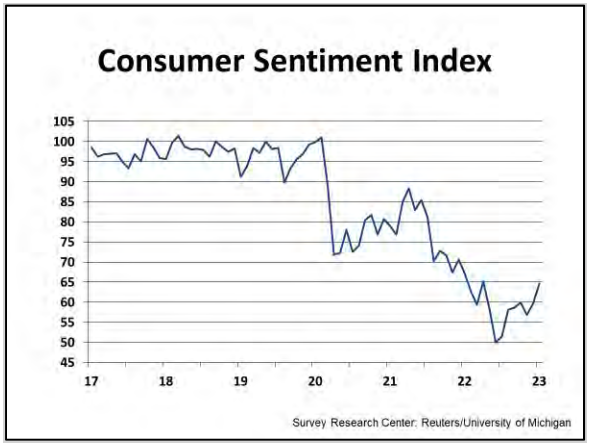


Figure 1 - Consumer Sentiment Index

U.S. Gross Domestic Product

As determined by the Bureau of Economic Analysis (BEA), U.S. 2022 preliminary fourth quarter real Gross Domestic Product (GDP) increased by 2.9% (Figure 2), while third quarter GDP increased by 3.2%. The increase in fourth quarter real GDP primarily reflected increases in private inventory investment, consumer spending, government spending, and nonresidential fixed investment that were partly offset by a

decline in residential fixed investment and exports.

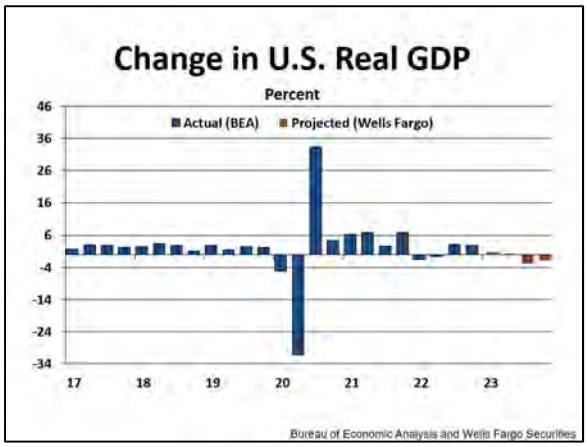


Figure 2 - Change in U.S. Real GDP

The Wells Fargo January 2023 *Monthly Outlook* projected U.S. GDP for the fourth quarter of 2022 at 3.1% and a 2022 annual rate of 2.1% as compared to 5.9% in 2021. U.S. economic growth is projected to slow down in 2023 at a rate of 0.9% in the first quarter, 0.3% in the second quarter, -2.7% in the third quarter, and -1.9% in the fourth quarter. Business fixed investment is expected to increase by 1.7% in 2023 and drop by -1.3% in 2024, as compared to an estimated 4.0% in 2022 and 6.4% in 2021. Overall, the annual growth rate projected by Wells Fargo is 0.8% in 2023 and 0.3% in 2024. The latest IMF projections take a similar tone regarding U.S. GDP with a 1.4% growth rate in 2023, followed by a slower growth rate of 1.0% in 2024.

Similar to other measures of economic activity, the ISM Purchasing Managers' Index (PMI) continues to contract due to a slowdown in demand. The PMI declined to 48.4 in December 2022, which was the lowest level since the height of the COVID-19 pandemic in May 2020. The PMI is an indicator of the economic health of the manufacturing and service sectors.

According to the BEA, U.S. real personal consumption expenditures (PCEs) expanded in the fourth quarter of 2022 by 3.5% (Figure 3), following an increase of 1.7% in the third quarter and 2.0% in the second quarter. Durable goods increased by 1.6% in the fourth quarter of 2022, following a decline of 24.6% in the third quarter and an increase of 11.6% in the second quarter. Nondurable goods declined by 0.1% in the fourth quarter following an increase of 2.0% in the third quarter and 13.9% in the second quarter. Services increased by 4.7% in the fourth quarter, 8.2% in the third quarter, and 11.5% in the second quarter.

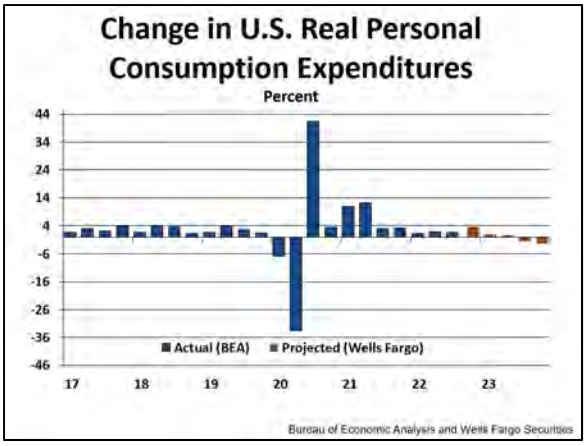


Figure 3 - Change in U.S. Real Personal Consumption Expenditures

The latest outlook by Wells Fargo puts the 2022 fourth quarter growth in PCEs at 3.4%. In 2023, Wells Fargo estimates that PCEs will increase by 1.0% in the first quarter and 0.8% in the 2nd quarter. In the third and fourth quarters of 2023, PCE's are projected to decline by 1.4% and 2.3%, respectively.

U.S. Employment

Civilian employment has steadily increased following the low in April 2020. In December 2022, civilian employment had recovered to 60.1% of the population, which is just slightly below pre-pandemic levels (Figure 4).

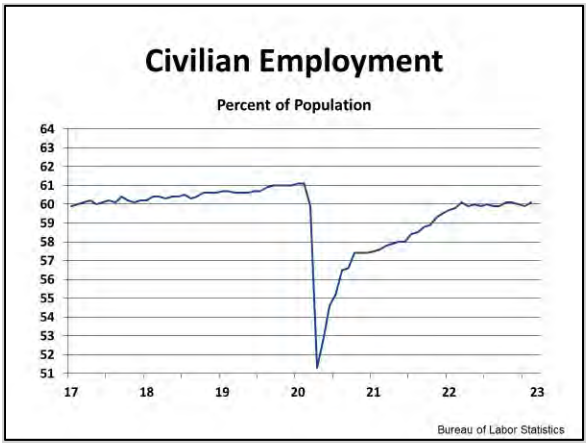


Figure 4 - Civilian Employment

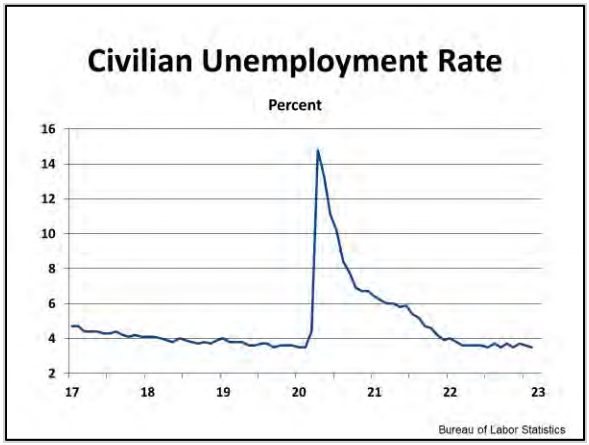


Figure 5 - Civilian Unemployment Rate

Total nonfarm payroll employment increased by 233,000 in December 2022. Employment increased in leisure and hospitality, health care, construction, social assistance, other services, and mining.

Employment in leisure and hospitality increased by 67,000 in December 2022. Employment in health care increased by 55,000 in December while employment in construction increased by 28,000. Employment in social assistance increased by 20,000 in December.

Employment in the other services industry increased by 14,000 while mining employment increased by 4,000.

Employment showed little or no change in retail trade, manufacturing, transportation and warehousing, government, wholesale trade, information, financial activities and professional and business services.

According to the latest government estimates, the December 2022 unemployment rate was 3.5% (Figure 5), as compared to 3.9% at this time a year ago.

U.S. Housing Market

The housing industry, a key barometer of the well-being of the economy, showed some improvement in the first quarter of 2022 but conditions worsened throughout the remainder of year. According to the U.S. Census Bureau, the seasonally adjusted annual rate for new-home construction was 1.3 million units in December 2022 (Figure 6). This is 1.5% below the November 2022 estimate and 12.0% below the October 2022 estimate. As compared to December 2021, the number of new housing starts is 29.9% lower.

Figure 6 - U.S. New Housing Starts

As noted by Freddie Mac, 2022 mortgage rates increased at the fastest rate since the early 1980s resulting in a deceleration in the housing market as markets absorbed the impact of higher rates.

The average 30-year mortgage rate was 4.5% during the first half of 2022 and 6.1% during the second half of the year (Figure 7). At 6.3%, the 30-year mortgage rate at the end of January 2023 declined by 0.04% from the previous month. Based on Freddie Mac's quarterly housing outlook survey, market confidence in the fourth quarter of 2022 fell to the lowest point since tracking began in March 2020 as payment concerns increased for homeowners and renters.

In early February 2023, the 30-year mortgage rate dropped slightly to 6.0% as inflation continues to moderate. Current rates are at the lowest level since September 2022. Looking forward, Freddie Mac expects 30-year mortgage rates to average 6.4% in 2023, while the Mortgage Bankers Association expects 30-year rates to average 5.7% in 2023. Declining interest rates could provide a boost to the housing market. However, a contraction in housing market activity is expected to continue in 2023. This could increase the supply of available homes for sale from the historically low levels in 2022.

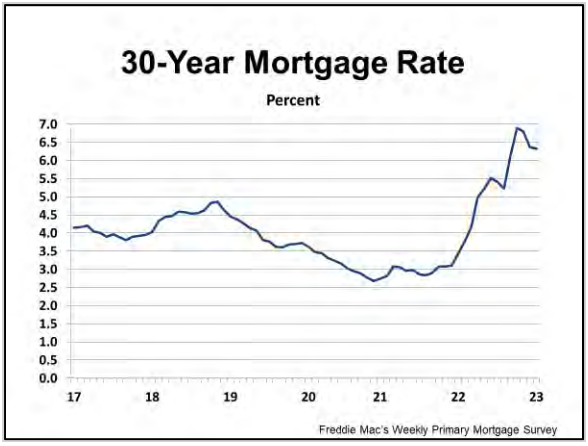


Figure 7 - 30-Year Mortgage Rate

Federal Reserve Board

According to the minutes from the February 2023 Federal Open Market Committee, the Committee decided to raise the target range for the federal funds rate to a range of 4.5% to 4.75% (Figure 8). The Committee anticipates that ongoing increases in the target range will be appropriate in order to maintain a sufficiently restrictive monetary policy to return inflation to 2.0%. When examining future increases to the target range, the Committee will consider the cumulative tightening of monetary policy, the lags between monetary policy changes and impacts on economic activity and inflation, as well as economic and financial developments.

The Committee is strongly committed to returning inflation to 2.0% and will continue to monitor economic conditions, including labor market conditions, inflation pressures and inflation expectations, and financial and international developments.

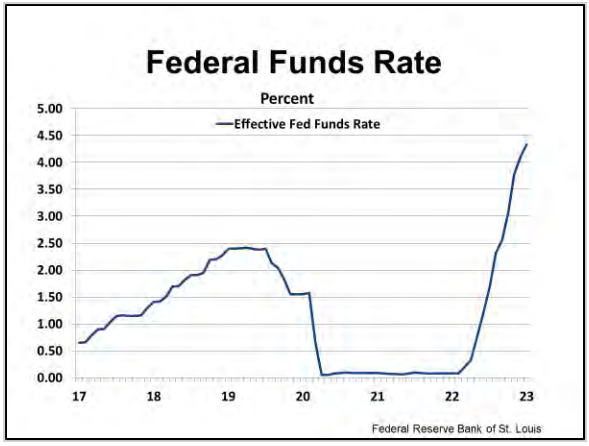


Figure 8 - Federal Funds Rate

Based on the January 2023 *Wall Street Journal* economist survey, higher interest rates are expected to push the U.S. economy into a recession in the coming year. Average responses indicate that the probability of a recession in the next 12 months is 61.0% as compared to 63.0% in the October 2022 survey. However, a recession is expected to be relatively mild and short-lived. Respondents expect annual inflation to slow to 3.1% by December.

Federal Budget Situation

Based on the most recent budget report in May 2022, federal spending for fiscal year

2022 was estimated to decline by 13.9% to $5.9 trillion as compared to $6.8 trillion in 2021 (Figure 9). Revenue for 2022 was estimated to be $4.8 trillion.

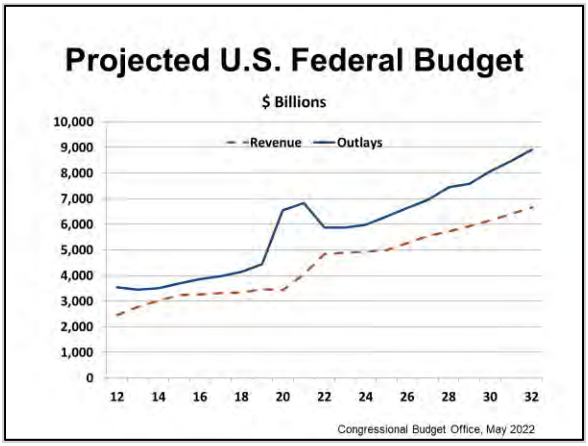


Figure 9 - Projected U.S. Federal Budget

The estimated budget deficit for 2022 was $1.0 trillion (Figure 10). The federal budget deficit declined from 12.4% of gross domestic product (GDP) in 2021 to 4.2% in 2022 as COVID-related federal spending declined. The deficit is projected to decline in 2023 and then steadily increase until 2032. According to CBO's long-term projections, the annual deficit would increase to 5.5% of GDP by 2031.

However, with the assumption that current laws governing taxes and spending remain unchanged, federal deficits are expected to remain large relative to historic levels and increase over the next decade.

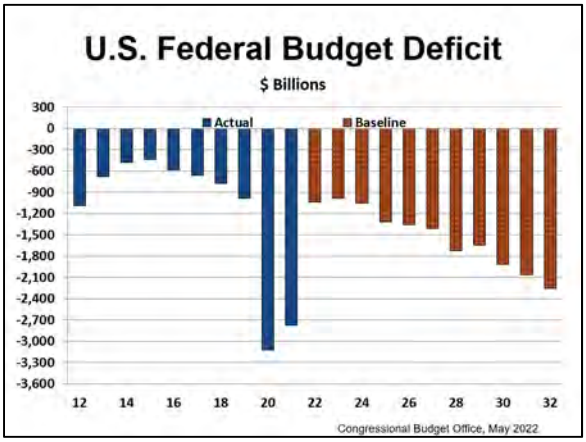


Figure 10 - U.S. Federal Budget Surplus

Although current deficits are large, federal debt as a percentage of GDP is projected to drop slightly to 96% in 2023 due to the rapid growth of nominal GDP. However, after 2023, the federal debt as a percentage of GDP is projected to increase each year and is projected to reach a record level of 110.0% by 2032.

Consumer and Producer Price Indices

Inflation acts as a tax on investment by increasing the cost of equity-financed investment and reducing corporate equity values. U.S. inflation is commonly measured by the Consumer Price Index (CPI) and the Producer Price Index (PPI).

Measured by the December-to-December change, the CPI rose 6.5% in 2022. In 2021, the December-to-December change was 7.0% (Figure 11). For 2022, the annual average CPI grew at 8.6%, which was much higher than the 2021 rate of 4.7%.

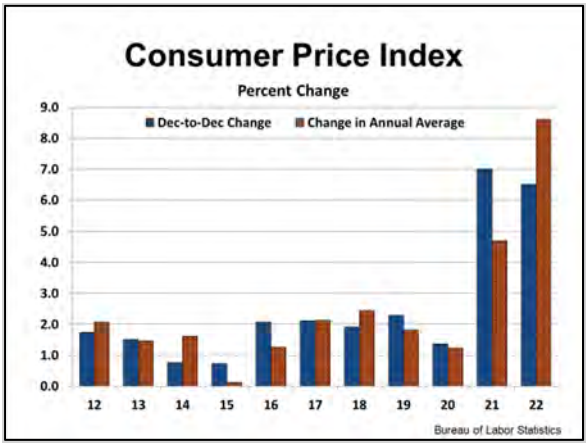


Figure 11 - Consumer Price Index

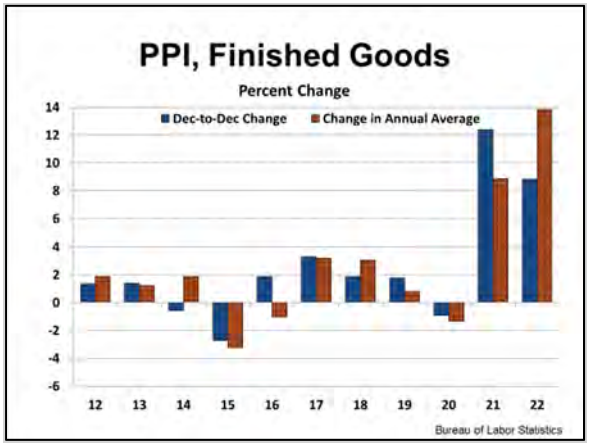


Figure 12 - Producer Price Index, Finished Goods

The index for all items less food and energy rose by 6.5% over the last 12 months. The food index rose 10.4% over the last year, while the energy index increased by 7.3%.

The index for all items less food and energy rose by 0.3% in December as compared to November. The energy index declined by 4.5% in December, while the gasoline index declined by 9.4%. The shelter index increased by 0.8% in December. The indexes for food, electricity, utility gas service, new vehicles, apparel, medical service commodities, transportation, and medical care services increased in December.

On a December-to-December basis, the PPI for finished goods increased by 8.8% in 2022 (Figure 12) as compared to 12.4% in 2021. For 2022, the annual average PPI grew by 13.9%, which is much higher than the 2021 rate of 8.9%.

Energy Prices and Supply

For 2023, energy prices remain at the forefront of any analysis of the general economy. According to the U.S. Energy Information Administration (EIA), the short-term energy outlook reflects a significant level of uncertainty due to the ongoing concerns about global economic conditions along with easing COVID-19 restrictions in China. In January 2023, oil prices averaged $75 per barrel as compared to $83 per barrel in January 2022.

The EIA short-term outlook includes a mild U.S. recession starting in the first quarter of 2023. GDP is expected to contract in the first quarter of 2023 and return to positive growth by the third quarter to reach 0.5% overall growth for 2023.

Global consumption of petroleum and other liquid fuels averaged 99.4 million bbl/d in 2022 and is expected to increase to 102.2 million bbl/d by 2024 mostly due to growth in non-OECD countries, such as China and India. Global demand for oil is expected to slow in 2023 and pick up again in 2024.

Global production of petroleum is expected to reach 102.8 million bbl/d in 2024, up from 100.0 million in 2002. Global production is projected to increase by 1.1 million bbl/d in 2023 and 1.7 million bbl/d

in 2024. Larger growth in several non-OPEC and OPEC countries is expected to more than offset the estimated 1.5 million bbl/d reduction for Russia.

The U.S. and other non-OPEC countries are expected to add an additional 2.4 million bbl/d in 2023 and 1.1 million bbl/d in 2024. The U.S. represents the largest growth in non-OPEC production with 40.0% of growth in 2023 and 60.0% of growth in 2024.

Crude oil production from the Organization of the Petroleum Exporting Countries (OPEC) is expected to average 29.5 million bbl/d in 2024, up from an estimated 28.7 million bbl/d in 2022. Part of this growth is driven by Venezuela since Chevron is resuming oil production for export to the United States. EIA notes that the OPEC crude oil production forecast is subject to considerable uncertainty, driven both by country compliance with existing production targets, changes to existing targets, along with potential developments in Iran, Libya, and Venezuela.

While the impact of European Union sanctions as well as the G7 price cap on Russia's crude oil exports remains uncertain, most crude oil exports from Russia are expected to find buyers. However, the sanctions on petroleum productions could create larger disruptions to Russia's oil production and exports.

Crude oil prices increased throughout the first half of 2022 to reach $115 per barrel in June, which was the highest monthly average since 2014. Prices declined during the second half of the year to $76 per barrel at the end of December (Figure 13). As of the end of January 2023, the crude oil price was $78 per barrel. EIA expects oil prices to average $83 per barrel in 2023 and $78 per barrel in 2024.

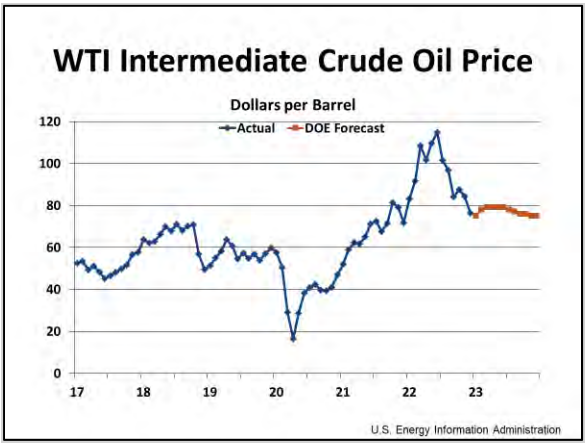


Figure 13 - WTX Intermediate Crude Oil Price

Retail diesel fuel prices (Figure 14), which track closely with crude oil prices, averaged $5.00 per gallon in 2022, which is $1.72 cents per gallon higher than the 2021 average price. Retail diesel prices increased during the first half of 2022 to reach $5.75 in June. During the second half of the year, prices were more volatile but dropped to $4.62 per gallon at the end of the year. The EIA projects diesel prices to average $4.20 per gallon in 2023 and $3.70 per gallon in 2024.

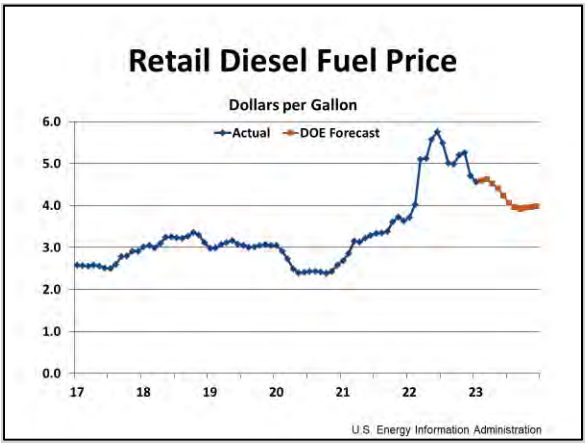


Figure 14 - Retail Diesel Fuel Price

The Henry Hub natural gas spot price averaged $6.42 per one million British thermal units (MMBtu) in 2022 as compared to $3.91 per MMBtu in 2021 (Figure 15). Prices increased during the first half of 2022 to reach $8.80 per MMBtu in August. In January 2023, the spot price averaged $3.40

per MMBtu as compared to $4.38 per MMBtu in January 2022. At the end of January 2023, the spot price had declined to $2.65 per MMBtu. Lower prices in January 2023 are due to warmer-than-normal temperatures across much of the country. EIA projects an average price of $3.54 per MMBtu in 2023 and $4.20 per MMBtu in 2024.

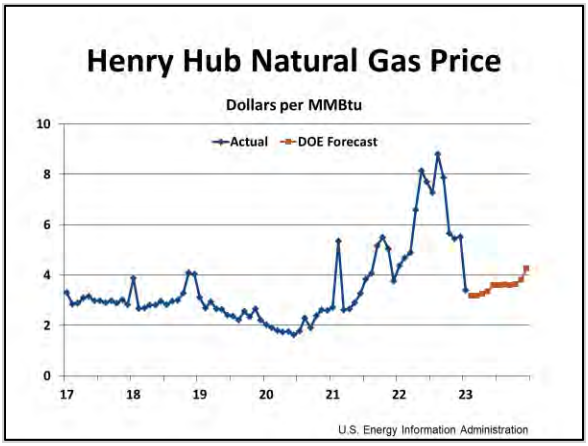


Figure 15 - Henry Hub Natural Gas Price

Natural gas consumption in the U.S. residential and commercial sectors was below the five-year average in January 2023 and is expected to fall below the average in February 2023 due to above average temperatures. As compared to 2022, natural gas consumption is expected to decline in 2023 and 2024. Natural gas production is expected to increase in 2023 and 2024 due to new pipeline infrastructure expansions in Texas, New Mexico, and Louisiana.

U.S. Equity Markets

After the large drop in March 2020, the Dow Jones Industrials Average (Dow) recovered to 36,386 by the end of 2021 (Figure 16). In 2022, the Dow declined from January to September, but has been on an upward trend over the last four months. As of February 2, the Dow had reached 34,054.

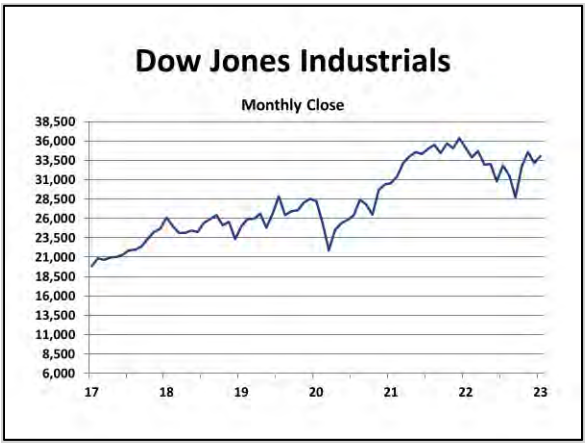


Figure 16 - Dow Jones Industrials

World Economies

While global economies expanded in 2022, the growth rate was slower than in 2021. According to the latest projections by the International Monetary Fund (IMF), the world economy expanded by 3.4% in 2022, as compared to an increase of 6.2% in 2021 (Figure 17). The IMF projections call for the world economy to grow by 2.9% in 2023 and 3.1% in 2024. Although IMF slightly increased the 2023 global growth projections as compared to their October 2022 outlook, the projections are still below the historical average (2000-2019) of 3.8%.

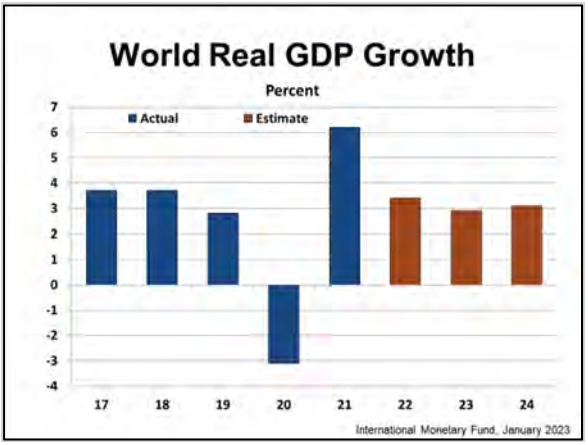


Figure 17 - World Real GDP Growth

The IMF projects that growth in advanced economies will slow from 2.7% in 2022 to 1.2% in 2023 and increase slightly to 1.4% in 2024. Growth rates have been revised downward for most economies. In the U.S.,

growth is expected to decline from 2.0% in 2022 to 1.4% in 2023 and 1.0% in 2024 (Table 2).

Table 2 - Selected Economies: Real GDP

Year-Over-Year % Changes				
	2021	2022f	2023f	2024f
World	6.2	3.4	2.9	3.1
U.S.	5.9	2.0	1.4	1.0
Euro Area	5.3	3.5	0.7	1.6
Japan	2.1	1.4	1.8	0.9
China	8.4	3.0	5.2	4.5
India	8.7	6.8	6.1	6.8
Russia	4.7	-2.2	0.3	2.1
Brazil	5.0	3.1	1.2	1.5
Mexico	4.7	3.1	1.7	1.6
Source: International Monetary Fund, January 2023				

According to the IMF, the output of emerging and developing economies (EMDEs) expanded at a rate of 3.9% in 2022 and will increase slightly to 4.0% in 2023 largely due to a projected increase in China's economic activity. China's growth rate is expected to increase from 3.0% in 2022 to 5.2% in 2023 and then decline to 4.5% in 2024. In India, the growth rate is projected to decline from 6.8% in 2022 to 6.1% in 2023 and then bounce back to 6.8% in 2024.

In Latin America and the Caribbean, growth is expected to slow from 3.9% in 2022 to 1.8% in 2023 and increase to 2.1% in 2024. In the Middle East and Central Asia region, growth is expected to decline from 5.3% in 2022 to 3.2% in 2023, then increase to 3.7% in 2024. In sub-Saharan Africa, growth is expected to remain at 3.8% in 2023 and increase to 4.1% in 2024.

Risks to the global baseline are tilted to the downside as recovery could be impacted by severe COVID-19 health impacts in China, an escalation of the Russia-Ukraine war, and tighter global financing conditions could worsen debt distress.

Exchange Rates

During periods of market uncertainty, traders sell currencies that are perceived riskier and place their bets in safer havens.

In 2022, the Pakistan Rupee averaged 205.03 per dollar, which is 26.2% higher than the average value in 2021 (Table 3). In early February 2023, the Pakistan Rupee stood at 229.93 per dollar.

The Brazilian real appreciated against the dollar in 2022. With an average of 5.16 per dollar, the real increased by 4.4% against the dollar in 2022 and increased further to 5.07 per dollar in early February 2023.

Table 3 - Selected Exchange Rates

Currency per U.S. Dollar			
	2020	2021	2022
Euro	0.89	0.85	0.95
Japanese Yen	106.78	109.88	131.55
Brazilian Real	5.16	5.40	5.16
South Korean Won	1,180	1,145	1,292
Indian Rupee	74.12	73.94	78.61
Indonesia Rupiah	14,486	14,296	14,795
Pakistani Rupee	161.70	162.48	205.03
Chinese Yuan	6.90	6.45	6.73
Source: WSJ.com			

The Euro, Japanese Yen, South Korean Won, Indian Rupee, Indonesia Rupiah, and Chinese Yuan all showed a depreciation against the dollar in 2022.

The Federal Reserve Board publishes a trade weighted U.S. dollar index comparing the dollar to other world currencies. The index has slowly trended upward since 2015 (Figure 18). In April 2020, the index was at the highest level since 2009, but dropped throughout the remainder of 2020 to 111.9 in December 2020. The index trended upward throughout 2021 and most of 2022 to reach 127.6 in October 2022. The index declined in the last few months of 2022.

Figure 18 – Trade Weighted U.S. Dollar Index

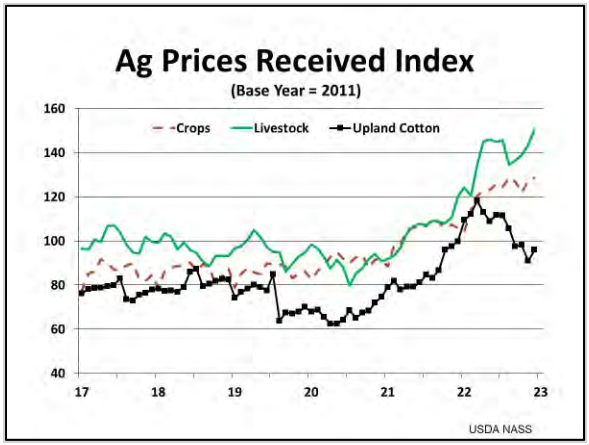


Figure 19 - Ag Prices Received Index

Commodity Prices

The U.S. Department of Agriculture (USDA) publishes monthly indices of prices received by farmers. In 2022, the crop price index trended upward throughout most of the year. In December 2022, the crop price index was 128.6 (Figure 19) as compared to 105.9 in December 2021. While the price index for most major commodities increased, the cotton price index declined from 99.7 in December 2021 to 95.9 in December 2022.

The livestock price index increased to 150.4 in December 2022. As compared to a year ago, the livestock price index was 25.1% higher. Compared to a year ago, prices of cattle, calves, hogs, milk, and eggs increased, while the price received for broilers declined.

USDA also publishes monthly indices of prices paid by farmers for various production inputs. Of particular interest are the indices for energy related inputs such as diesel fuel and nitrogen fertilizer. In line with the previous discussion on retail diesel prices, the diesel prices paid index trended upward in the first half of 2022, experienced some up and down swings in the second half of the year before declining in December. In December 2022, the diesel price index was 30.8% higher than in December 2021 and 100.6% higher than in December 2020. The nitrogen price index generally followed the same trend as the diesel price index in 2022 and ended the year 9.2% higher than in December 2021 (Figure 20) and 107.4% higher than in December 2020.

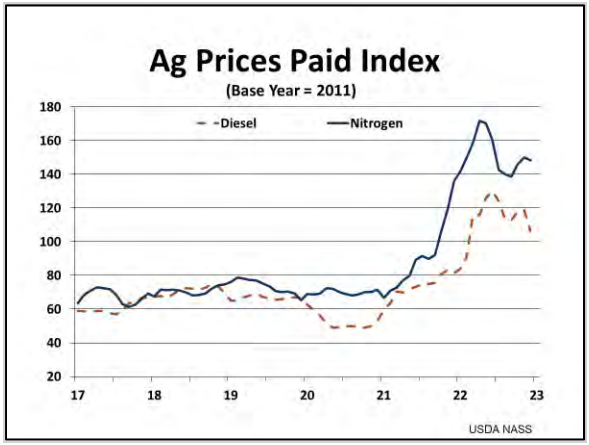


Figure 20 - Ag Prices Paid Index

U.S. Net Farm Income

The latest USDA Economic Research Service (ERS) *Farm Sector Income Forecast* report released in December 2022 included a 2022 U.S. net farm income estimate of $160.5 billion, up 13.8% from the 2021 value of $141.0 billion (Figure 21). In inflation-adjusted dollars, the 2022 increase in net farm income was $10.7 billion or 7.2%, while net cash farm income was forecast to increase by $30.1 billion in 2022. If realized, net farm income would be at the highest level since 1973 and net cash farm income would be at a record level.

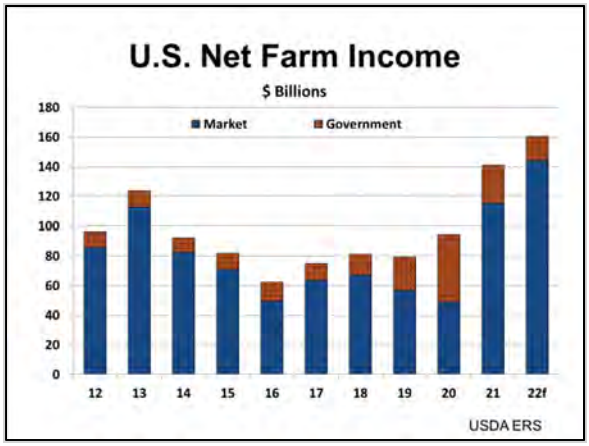


Figure 21 - U.S. Net Farm Income

According to USDA ERS, total commodity receipts increased in 2022. The increase in crop receipts was estimated at $45.5 billion, or 19.0% higher than 2021 in nominal terms. Corn, soybeans, and wheat receipts accounted for most of the net increase, but other commodity receipts increased as well.

Total animal and animal product receipts were estimated to increase by $60.2 billion, or 30.8% in nominal terms in 2022 with an increase in all major categories.

Cash receipts for broilers, eggs, and turkeys were estimated to increase in 2022 in nominal terms by 55.2%, 115.0%, and 19.0%, respectively. Milk receipts were estimated to increase by 38.1% in 2022. Cattle/calves receipts were estimated to be 19.1% higher in 2022. Hog cash receipts were estimated to increase by 5.5% in 2022.

Total farm sector production expenses were projected to increase by $69.9 billion, or 18.5% in 2022 largely due to higher feed, fertilizer, interest, fuel, and oil expenses. In nominal terms, this represents the largest year-to-year dollar increase on record. When adjusted for inflation, the increase from 2021 to 2022 was estimated to be 11.8%, which is below the record-high levels in 2012-2014.

Government payments were projected to decline in 2022 to $16.5 billion as compared to 2021. This includes a decline of $11.9 billion in supplemental and ad hoc disaster assistance payments in 2022 largely due to lower payments from COVID-19 related assistance program.

Farm financial risk indicators such as the debt-to-asset and debt-to-equity ratios were expected to decline in 2022. An increase of $3.34 trillion, or 10.6% in farm sector equity (total assets - total debt) was projected for 2022 (in nominal terms). Farm sector assets were expected to increase by 10.0% to $3.85 trillion largely due to an increase in real estate assets. When adjusted for inflation, farm sector equity and assets were estimated to increase by 4.1% and 3.5%, respectively. Farm sector debt was expected to increase by 5.9% to $501.9 billion in 2022 in nominal terms. However, when adjusted for inflation, farm sector debt was projected to decline by 0.4%.

U.S. Farm and Trade Policy

Agricultural policy provisions applying to the 2023 crop are authorized by the Agricultural Improvement Act of 2018, also known as the 2018 Farm Bill.

The Agricultural Improvement Act of 2018

The Agricultural Improvement Act of 2018 maintained policy provisions important to upland and ELS cotton with some modifications.

Seed Cotton PLC/ARC Program

The 2018 Farm Bill continued the seed cotton Price Loss Coverage (PLC) and Agriculture Risk Coverage (ARC) programs. Seed Cotton refers to unginned upland cotton that includes both lint and cottonseed. The reference price was maintained at $0.367 per lb.

Starting with the 2019 marketing year, producers had the option to elect ARC or PLC for seed cotton and that election was effective for the 2019 and 2020 marketing years. Beginning in 2021, producers had the option to make an annual ARC or PLC election for seed cotton.

The 2018 Farm Bill includes the addition of effective reference prices which allow PLC reference prices to adjust with sustained improvements in market prices. The effective reference price is equal to the greater of 85.0% of the rolling 5-year Olympic average price and the PLC Reference Price. The effective reference price cannot be less than the reference price or greater than 115.0% of the reference price.

When calculating the benchmark revenue for ARC, the effective reference price will be used as part of the calculation for the 5-year Olympic average price when the effective reference price is higher than the marketing year average price. The 5-year Olympic average yield will use either the county average yield or 80.0% of the county transitional yield, whichever is higher for that year.

Base Loan Rates, Marketing Assistance Loans and LDP's

The marketing assistance loan for upland cotton is maintained in the 2018 Farm Bill. The level of the upland cotton marketing loan rate is based on the 2-year moving average of the adjusted world price (AWP) as announced by USDA. The annual decline is limited to 2.0% of the previous year's loan rate.

Specifically, the loan rate is equal to the 2-year average AWP for the two most recently completed marketing years as of October 1 in the fall prior to planting. For example, the 2023 loan rate is based on the 2020 and 2021 marketing years since those are the 2 most recent years as of October 1, 2022. However, the loan rate cannot exceed 52 cents per pound nor be less than 45 cents per pound.

The 2018 Farm Bill includes an increase in the ELS loan rate to $0.95/lb. The maximum price trigger for the ELS competitiveness payment is adjusted from 134.0% of the loan rate to 113.0% of the loan rate so the adjustment does not result in the program triggering more often.

Marketing loan repayment provisions, the determination of the premium and discount schedules, and storage credits remain unchanged from the 2014 farm law.

Payment Yields

Effective for the 2020 crop, producers had the opportunity to update payment yields on all crop bases on a farm-by-farm and

commodity-by-commodity basis. The yield update is based on 90.0% of the average farm yields from 2013-2017, only including years when a crop was planted. A plug yield equal to 75.0% of county average yield for 2013-2017 was used for any years where the farm's yield is below that level. Each crop has an additional adjustment factor based on crop specific national yield data. The adjustment factor for cotton is 90.0%. So, the yield update for cotton is 90.0% times 90.0% of the average farm yields from 2013-2017, which is equal to 81.0% of the average farm yields from 2013-2017.

Payment Limitations and Eligibility Requirements

The 2018 Farm Bill maintains payment limitations and eligibility requirements contained in the 2014 Farm Bill, with a few modifications. The income means test is based on total adjusted gross income (AGI) of $900,000 for commodity and conservation benefits. A payment limit of $125,000 per entity applies to payments received under Title I price and revenue programs.

The $125,000 payment limit no longer applies to marketing loan benefits, including both marketing loan gains (MLGs) and loan deficiency payments (LDPs). The current legislation maintains the separate limit for peanuts.

Commodity Marketing Certificates

Commodity certificates are maintained in the 2018 Farm Bill. Certificates allow producers with outstanding marketing assistance loans to purchase certificates and then exchange the certificate for their outstanding loan collateral rather than forfeit that loan collateral to CCC at loan maturity. By redeeming a loan with commodity certificates, the MLG, if available, is not subject to the AGI means test or the $125,000 payment limitation. A commodity certificate exchange is not considered a "program benefit" but is considered an exchange in loan collateral.

Actively Engaged

The actively engaged provisions from the 2014 Farm Bill are maintained in the 2018 legislation, along with an expansion in the definition of family members. The family definition for actively engaged purposes now includes nieces, nephews, and first cousins as lineal family members.

To be considered "actively engaged in farming", certain requirements must be met for farming operations conducted by general partnerships and joint ventures that encompass non-family members. Additional details are available on the USDA-FSA website at www.fsa.usda.gov.

Stacked Income Protection Plan

The Stacked Income Protection Plan (STAX) is maintained in the 2018 Farm Bill. However, starting with the 2020 marketing year, farms enrolled in ARC or PLC are not eligible for STAX coverage. Producers enroll annually in ARC or PLC, so they can choose to not enroll a farm in ARC or PLC for a particular year and purchase STAX.

STAX is available for purchase in essentially all counties in which USDA's Risk Management Agency (RMA) offers upland cotton insurance products. Administered in a manner consistent with current crop insurance delivery systems, STAX is designed to complement existing crop insurance products. The STAX plan addresses revenue losses on an area-wide basis, with a county being the designated area of coverage. In counties lacking sufficient data, larger geographical areas such as county groupings are necessary in order to preserve the integrity of the program.

As with other insurance products, STAX is not subject to payment limitations or means

tests. County-specific details are available both on the NCC website www.cotton.org and the USDA-RMA website www.rma.usda.gov.

Cotton Import Provisions

The 2018 Farm Bill continues without change the rules for triggering import quotas. A Special Import Quota will be opened when the average U.S. quote in the international market exceeds the prevailing world market price for 4 consecutive weeks. Global Import Quotas are triggered when the base quality spot price for a month exceeds 130.0% of the average for the previous 36 months.

ELS Cotton Competitiveness Provisions

The farm law continues competitiveness payments for eligible domestic users and exporters of American Pima cotton. The payment rate reflects the difference between the American Pima quote in the Far Eastern market (APFE) and the lowest foreign quote in the Far East (LFQ), adjusted for quality. The maximum price trigger for the ELS competitiveness payment is adjusted from 134.0% of the loan rate to 113.0% of the loan rate in order to reflect the higher ELS loan rate in the new legislation.

Economic Adjustment Assistance for Textile Mills

The highly successful assistance for U.S. textile mills continues in the 2018 Farm Bill. The program makes a payment of 3 cents per pound for all upland cotton consumed. Payments must be used for specific purposes such as acquisition, construction, installation, modernization, development, conversion, or expansion of land, plant buildings, equipment, facilities, or machinery.

Trade Negotiations & Disputes

Trade issues remain important to the U.S. cotton industry. United States Trade Representative (USTR) Katherine Tai continues to emphasize the convergence of trade policy, environment, and climate change issues. Under the Biden Administration, USTR is focused on crafting a worker-centered trade policy.

U.S-Mexico-Canada Agreement

On July 1, 2020, the United States-Mexico-Canada Agreement (USMCA) entered into force.

Overall, the USMCA preserves the benefits of NAFTA and encourages continued regional integration of the cotton and textile supply chain. It also enhances regulatory coordination on sanitary and phytosanitary (SPS) disciplines and encourages greater cooperation in biotechnology, including gene editing. Finally, it improves the terms of trade for U.S. textile manufacturers.

Perhaps the most important feature of the USMCA is the preservation of NAFTA's market access benefits for U.S. cotton and cotton products. During the USMCA's negotiation, NCC – along with other U.S. agricultural organizations – advocated a "do no harm" approach to market access for U.S. farm exports. USMCA retains NAFTA's market access benefits.

The new SPS chapter enhances regulatory transparency and encourages the compatibility of science-based measures. The advancement of transparent, non-discriminatory, science-based SPS and biotechnology measures in foreign markets was a primary negotiating objective of the U.S. agriculture community. The inclusion of these provisions in the USMCA represents a significant step forward. Unfortunately, Mexico has thus far failed to adhere to its commitments under the

USMCA SPS chapter. Since 2018, biotechnology permit approvals by the Government of Mexico have come to a standstill. Furthermore, Mexican President Andres Manuel Lopez Obrador announced the intent to phase out certain agricultural technologies, including the use of biotech corn for human consumption, by 2024. This decree was not based on science.

USMCA established a new, separate textile chapter, reflecting the scale and significance of regional textile and apparel trade, and incorporates NAFTA's yarn-forward rule of origin. Together with the preservation of market access for U.S. cotton exports, the incorporation of NAFTA's yarn-forward rule of origin represents another major benefit of the USMCA. Under NAFTA, the yarn-forward rule of origin has played a central role in the development of an integrated regional supply chain. It has also helped ensure that the benefits of increased trade accrued to manufacturers within the region.

The textile chapter also strengthens customs enforcement, which is particularly important to the sector, given that U.S. imports in the sector have annually accounted for approximately 40.0% of all U.S. duty revenue.

The USMCA also offers new benefits corresponding to the use of USMCA-origin sewing thread, pocketing, narrow elastics, and coated fabrics for certain end items. According to the National Council of Textile Organizations, the annual value of the regional market for sewing thread in apparel applications is approximately $250 million, while the annual market for pocketing is worth $70 million.

Finally, U.S. textile manufacturers will benefit from the USMCA's closure of a NAFTA loophole that exempts purchases by the U.S. Department of Homeland Security's Transportation Security Administration (TSA) from the Buy American requirements known as the Kissell Amendment. The USMCA no longer permits manufacturers from Canada and Mexico to qualify as "American" sources. In FY2019, TSA purchased approximately $35 million worth of textile and apparel products. Eliminating NAFTA's loophole thus provides significant benefits to manufacturers of U.S.-origin textile and apparel products.

China

Phase I Agreement

On December 1, 2018, after months of tariffs and retaliatory tariffs between the U.S. and China that originated from a Section 301 investigation by the U.S., President Trump and China's President Xi reached an agreement on the margins of the G20 meeting in Buenos Aires to delay an increase on tariffs originally scheduled for January 1, 2019. The agreement included a 90-day period of talks to resolve issues around IP theft, non-tariff barriers, and forced technology transfers. If no agreement was reached at the end of the 90-day period, the tariff increase would be implemented. According to the White House, China also agreed to purchase substantial amounts of agricultural, energy, industrial and other products from the U.S. to reduce the trade imbalance. The first round of talks between the U.S. and China was held in Beijing January 7-9, 2019. Several other rounds of talks were held in 2019. On December 13, 2019, the U.S. and China reached an agreement on a Phase 1 trade deal that required structural reforms and other changes to China's economic and trade regime.

The U.S. and China signed the Phase 1 agreement on January 15, 2020. The agreement entered into force on February 14, 2020, 30 days after signing. In light of the entry into force of the agreement, the

U.S. Trade Representative determined to reduce the level of additional duties on goods included on List 4A from 15.0% to 7.5%. The 7.5% tariff was effective February 14, 2020. On February 6, 2020, China announced it would cut in half some of the retaliatory tariffs on $75 billion worth of U.S. goods it imposed in September 2019. The 10.0% tariffs on roughly 900 items dropped to 5.0% and the 5.0% tariffs on approximately 800 items dropped to 2.5%. The tariff cuts took effect on February 14, 2020.

The Phase 1 agreement included a chapter on agriculture with Chinese purchases of total U.S. agricultural products, including cotton, intended to average at least $40 billion per year for 2020 and 2021. However, the overall impact for cotton was uncertain as commodity specific details on purchase commitments were not released. For the 2020 calendar year, U.S. exports of agricultural products to China were approximately $27.0 billion. U.S. exports of raw cotton fiber to China during the same time period were approximately $1.8 billion. For the 2021 calendar year, U.S. exports of agricultural products to China were approximately $33.5 billion while U.S. exports of raw cotton fiber to China during the same time period were approximately $1.3 billion. The agreement included a dispute resolution and enforcement mechanism to respond to industry issues related to any lack of compliance. USTR Tai has said the US intends to hold China accountable to the commitments made in the Phase 1 agreement.

Entity List Designation and Withhold Release Orders (WROs)

In 2020, the Trump Administration undertook two different types of national security and human rights-based measures: Entity List Designations and Withhold Release Orders (WROs).

An Entity List Designation is a sanction that prohibits the export of U.S. goods to sanctioned entities. These designations are imposed by the Commerce Department. Entities on the list have been determined by the U.S. Government to be acting contrary to the national security or foreign policy interests of the U.S. In recent years, several Chinese companies have been added to the Entity List. One of the companies added in 2020 was engaged in the purchase of U.S. cotton and cotton products.

WROs are imposed by Customs and Border Protection (CBP) and prohibit the importation of goods into the U.S. from companies and/or regions that are subject to the WROs. Since September 2020, the CBP has issued three WROs on cotton products from China. On September 14, 2020, CBP announced a WRO on cotton produced and processed by Xinjiang Junggar Cotton and Linen Co., Ltd. in Xinjiang Uyghur Autonomous Region, China. According to CBP, “information reasonably indicates that this entity and its subsidiaries use prison labor in their raw cotton processing operations in Xinjiang. Cotton-processing factories and cotton farms in this region are prison enterprises that use convict labor.”

On December 2, 2020, CBP announced another WRO on cotton and cotton products originating from the Xinjiang Production and Construction Corps (XPCC). This WRO was the sixth enforcement action that CBP announced in the later part of 2020 against goods made by forced labor from China’s Xinjiang Uyghur Autonomous Region (XUAR). In July 2020, the U.S. Government issued an advisory to caution businesses about the risks of forced labor in XUAR. The December 2nd WRO states that, "CBP’s Office of Trade directed the issuance of a Withhold Release Order (WRO) against cotton products made by the XPCC based on information that reasonably indicates the use of forced labor, including convict labor. The

WRO applies to all cotton and cotton products produced by the XPCC and its subordinate and affiliated entities as well as any products that are made in whole or in part with or derived from that cotton, such as apparel, garments, and textiles."
The WRO requires detention at all U.S. ports of entry of all cotton products produced by the XPCC and any similar products that the XPCC produces. Importers of detained shipments are provided an opportunity to export their shipments or demonstrate that the merchandise was not produced with forced labor.

CBP issued a region-wide "Withhold Release Order on Products Made by Slave Labor in Xinjiang" effective on January 13, 2021, that applies to all cotton/cotton products from China's Xinjiang region. The ban also applies to tomatoes and tomato products. The CBP noted in its release that, "This WRO will direct CBP personnel at all U.S. ports of entry to detain cotton products and tomato products grown or produced by entities operating in Xinjiang. These products include apparel, textiles, tomato seeds, canned tomatoes, tomato sauce, and other goods made with cotton and tomatoes. Importers are responsible for ensuring the products they are attempting to import do not exploit forced labor at any point in their supply chain, including the production or harvesting of the raw material."

Uyghur Forced Labor Prevention Act

The Uyghur Forced Labor Prevention Act (UFLPA) was signed into law by President Biden on December 23, 2021 and went into effect June 21, 2022. The Act creates a "rebuttable presumption" that any goods made in the Xinjiang Uyghur Autonomous Region are made with forced labor and prohibited from entering the United States unless "clear and convincing" evidence is shown to the contrary. The law also directs the Forced Labor Task Force, an interagency body created by the U.S.-Mexico-Canada Agreement implementing act, to develop a strategy for supporting enforcement of Section 307 of the Tariff Act of 1930 to prevent the import to the U.S. of goods "manufactured wholly or in part with forced labor in the People's Republic of China" -- not just the Xinjiang region.

U.S. Customs and Border Protection announced a UFLPA Entity List of entities whose goods are mined, produced or manufactured, wholly or in part, with the use of forced labor are therefore prohibited. To overcome this rebuttable presumption, such goods may be imported only if the U.S. importer can demonstrate by a very high standard of "clear and convincing evidence" that they were not in fact mined, produced or manufactured wholly or in part from forced labor. Imports of cotton and apparel goods are considered "high risk" for exposure to forced labor in the XUAR, meaning they will be subject to particular scrutiny under the UFLPA.

CAFTA-DR

The Dominican Republic-Central America-United States Free Trade Agreement (CAFTA-DR) includes the participating countries of Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua. The Agreement entered into force between the United States and El Salvador on March 1, 2006, Honduras on April 1, 2006, Nicaragua on April 1, 2006, Guatemala on July 1, 2006, the Dominican Republic on March 1, 2007 and Costa Rica on January 1, 2009.

According to the provisions of the CAFTA-DR agreement, textiles and apparel are duty-free and quota-free if they meet the agreement's yarn-forward rule of origin. This means that only apparel using yarn and fabric from the U.S., Central America and the Dominican Republic qualifies for duty-free benefits.

The textile provisions also include a number of avenues for 3rd-country participation, including 'cumulation', Tariff Preference Levels (TPLs) which authorize the use of a specified quantity of 3rd country components, a fabric-forward rule of origin for certain products and allowances for 'single transformation' for a number of others.

The agreement also contains a revised short supply process that includes tighter timelines than in earlier short supply processes, allows items to be deemed in partial short supply, and provides for items to be added to and removed from the short supply list.

In January 2022, in response to efforts by some to weaken the yarn-forward rule of origin in CAFTA, the National Council of Textile Organizations (NCTO) released an independent study examining the economic and societal impact of the CAFTA-DR and the significant adverse impact of proposals aimed at weakening the agreement's yarn-forward rules of origin.

The study was done by Werner International and highlights the importance of maintaining the current rules of origin in the agreement that supports more than a million jobs in the United States and the region and $12.5 billion in two-way trade, while fostering significant investments in manufacturing and apparel production. The study also finds that various proposals aimed at weakening the agreement's longstanding textile rules of origin would severely harm the region and United States and result in massive job, investment, and export losses.

The study findings, which project a 30.0% sales drop for U.S. cotton producers, include an estimated loss of more than 300,000 textile and cotton industry jobs in the United States and 250,000 job losses in Central America's textile industry. The study also projects that the proposed rule of origin changes would chill further investment in the region and cripple efforts to re-shore/nearshore textile manufacturing in the Western Hemisphere, including developing of supply chain for critical personal protection equipment.

In addition to outlining the projected harm that would be caused by changes to CAFTA-DR, the study also highlighted several important policy provisions that could help further incentivize investment and jobs in the region. Some of these proactive steps include: better coordination among lending agencies of the federal government; support for a comprehensive infrastructure plan with targeted, high-impact investments and competitive loans to upgrade regional power grids, roads, and local ports; provide incentives to the Western Hemisphere co-production chain for carbon emission reductions and sustainable products; refrain from changing cumulation and short supply process; and oppose granting duty-free access and other benefits through an expansion of the Generalized System of Preferences program.

WTO Trade Talks

The Ministerial Conference is the highest decision-making body of the WTO. Under the Marrakesh Agreement Establishing the WTO, the Ministerial Conference is to meet at least once every two years. After being postponed twice due to the COVID-19 global pandemic, the 12th Ministerial Conference took place June 12-17, 2022 in Geneva, Switzerland. The Ministerial was primarily focused on measures to respond to the COVID-19 pandemic, food security and efforts to reform the WTO's dispute settlement system. Cotton was not a subject of heavy discussion.

AGOA

The African Growth and Opportunity Act (AGOA) provides preferential access of

textile and apparel products to the U.S. market for qualifying countries in Africa. The Trade Preference Extension Act extended the provisions of AGOA to September 30, 2025.

The AGOA legislation requires an annual determination of which countries are eligible to receive benefits under the trade act. Countries must make continued progress toward a market-based economy, rule of law, free trade, and economic policies that will reduce poverty, and protect workers' rights. There are now 35 countries that are eligible for economic and trade benefits under AGOA. Of those 35 Sub-Saharan countries, 23 of them are eligible to receive AGOA's apparel benefits. Twenty-two countries also qualify for the Less Developed Country (LDC) special rule for apparel (third-country fabric). Fifteen countries also qualify for AGOA's provisions for hand-loomed and handmade articles. Four countries qualify for AGOA's ethnic printed fabric benefits.

Other Trade Issues

Trade Promotion Authority (TPA)

Trade Promotion Authority (TPA) allows free trade agreements negotiated in compliance with the legislation's provisions to be presented to Congress for approval by an up-or-down vote without amendments. It is generally accepted that TPA is essential to gain approval of free trade agreements. Under the 2015 Trade Promotion Authority law, TPA can be extended if the President submits a request to Congress for extension and neither House of Congress adopts an extension disapproval. TPA was authorized through July 1, 2021. Since President Biden did not request an extension of TPA it expired on that date. As of the writing of this publication, the Biden Administration has shown no interest in requesting TPA.
A historical review of various trade agreements affecting textiles can be found at www.cotton.org.

U.S. Supply

2022 Planted Acreage

U.S. farmers planted 13.6 million acres of upland cotton in 2022, an increase of 22.5% from the previous year (Figure 22).

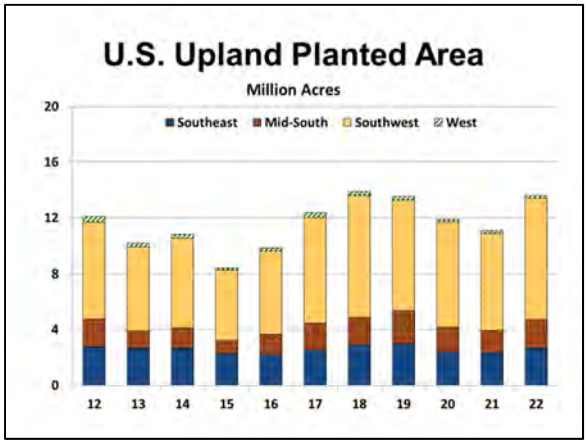


Figure 22 - U.S. Upland Planted Area

In the Southeast, 2022 cotton acreage increased by 335 thousand acres, or 14.4% (Figure 23). Alabama, Florida, Georgia, North Carolina, South Carolina, and Virginia increased cotton acreage by 7.4%, 15.2%, 10.3%, 25.3%, 28.6%, and 21.3% respectively. State totals for the region are: Alabama – 435 thousand acres, Florida – 106 thousand acres, Georgia – 1.3 million acres, North Carolina – 470 thousand acres, South Carolina – 270 thousand acres, and Virginia – 91 thousand acres.

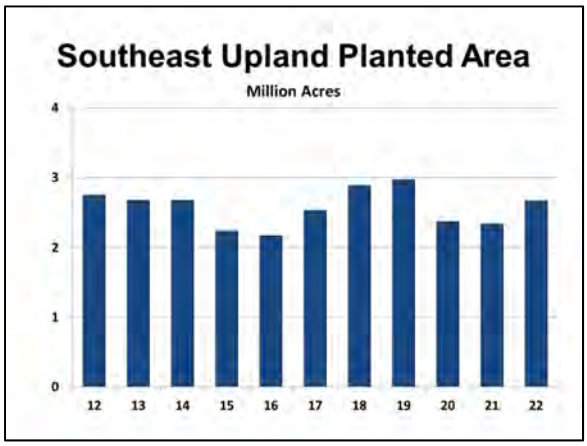


Figure 23 - Southeast Upland Planted Area

In 2022, plantings of 2.1 million acres in the Mid-South represented a 26.8% increase (Figure 24) from the previous year. In recent years, Mid-South farmers have demonstrated their ability and willingness to adjust their crop mix based on market signals. Acreage increased in all Mid-South states in 2022. For Arkansas, Louisiana, Mississippi, Missouri, and Tennessee, acreage increased by 33.3%, 77.3%, 19.1%, 14.3%, and 21.8%, respectively. State totals for the region are: Arkansas – 640 thousand acres, Louisiana – 195 thousand acres, Mississippi – 530 thousand acres, Missouri – 360 thousand acres, and Tennessee – 335 thousand acres.

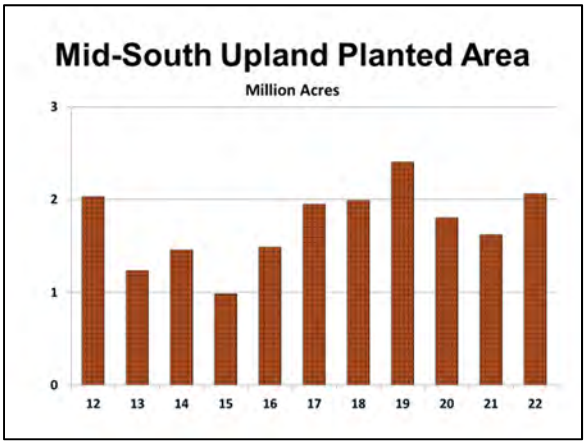


Figure 24 - Mid-South Upland Planted Area

In the Southwest, 2022 upland cotton area increased by 24.9% to 8.7 million acres (Figure 25). With a 35.4% increase, Oklahoma's cotton area increased from 495 thousand acres to 670 thousand acres. Kansas area increased by 50.0%, bringing the 2022 total to 165 thousand acres. In Texas, producers planted 7.9 million acres, a 23.6% increase from 2021.

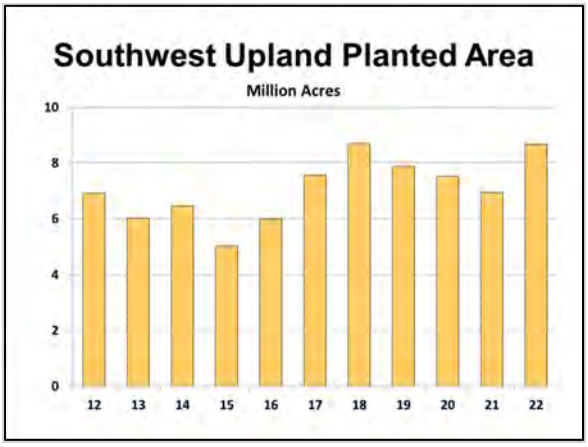


Figure 25 - Southwest Upland Planted Area

Upland acres in the West stood at 173 thousand acres in 2022, down 4.9% from 2021 (Figure 26). Acreage decreased by 26.7% in Arizona and 23.1% in California. Acreage increased by 80.6% in New Mexico.

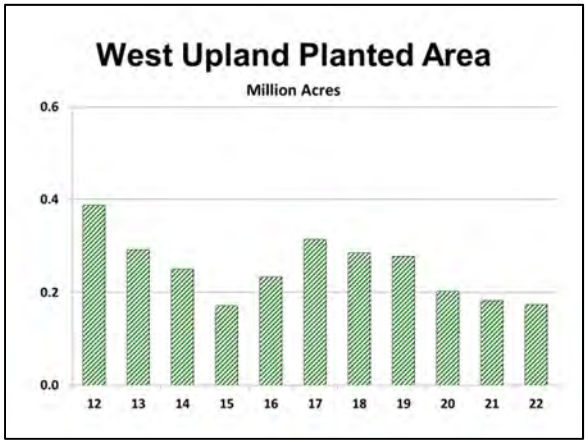


Figure 26 - West Upland Planted Area

In 2022, overall ELS acreage increased by 44.7%, with planted area at 183 thousand acres (Figure 27). Acreage increased by 66.7% in Arizona, 31.8% in California, 52.0% in New Mexico, and 94.1% in Texas.

Figure 27 - U.S. ELS Planted Area

2022 Harvested Acreage

Overall U.S. abandonment was 45.9%, up 37.5 percentage points from 2021 and the highest level on record (Figure 28). In Texas, 73.9% of upland acres were unharvested, which was 41.7% above the 5-year average. In Oklahoma, 56.7% of acres were unharvested, which was 36.7% above the 5-year average. In Kansas, 10.9% of the acres were unharvested, which was slightly above the 5-year average of 8.7%.

In the Southeast, the overall abandonment level was slightly lower as compared to 2021. In Alabama, 1.2% of acres were abandoned as compared to the 5-year average of 1.5%. In Georgia, 0.8% of acres were abandoned as compared to the 5-year average of 2.7%. In Florida, the abandonment rate was 1.9% as compared to the 5-year average of 6.6% which includes the unusually high abandonment rate in 2018. In North Carolina, 2022 abandonment of 2.1% was lower than the 5-year average of 3.6%. In South Carolina, abandonment was 1.9% as compared to the 5-year average of 3.7%. In Virginia, 2022 abandonment was 1.1% as compared to the 5-year average of 1.1%.

In the Mid-South, the 2022 abandonment rate was slightly higher than the 5-year average in Arkansas, Missouri, and

Tennessee. The abandonment rate for Arkansas, Louisiana, Mississippi, Missouri, and Tennessee, was 1.6%, 2.6%, 0.9%, 5.6%, and 3.0%, respectively. The 2022 abandonment rate for upland cotton in the West was 21.1% which was above the 5-year average of 7.8%. For ELS cotton, 2022 abandonment was 2.6%, above the 5-year average of 1.9%.

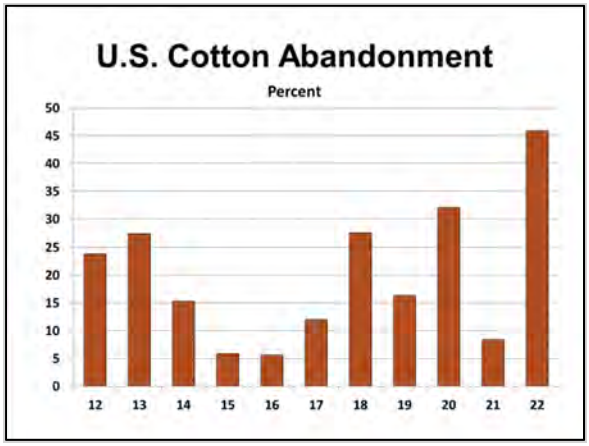


Figure 28 - U.S. Cotton Abandonment

2022 Yields

In 2022, the estimated national average cotton yield per harvested acre of 947 pounds is the highest yield on record. The 2022 yield was 128 pounds higher than the previous year and 92 pounds higher than the 5-year average (Figure 29). Looking at the numbers in more detail provides a better insight to the varying conditions faced by growers across the Cotton Belt. Overall, the Southeast, Southwest, and West regions had above average yields in 2022.

In the Southeast, the 2022 yield was higher than in 2021 for all states except South Carolina.

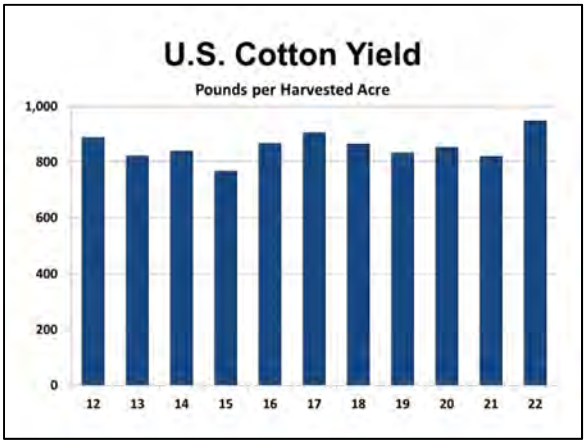


Figure 29 - U.S. Cotton Yield

The 2022 Southeast yield of 978 pounds is the 2nd highest on record and was 61 pounds higher than 2021 and 110 pounds above the 5-year average (Figure 30). In Alabama, the 2022 yield of 938 was 112 pounds higher than 2021 and 75 pounds higher than the 5-year average. In Florida, the 2022 yield of 785 pounds was 145 pounds higher than in 2021 and 105 pounds above the 5-year average.

The 2022 Georgia yield of 975 pounds is the 2nd highest on record and was 61 pounds higher than 2021 and 113 pounds higher than the 5-year average. The 2022 North Carolina record yield of 1,043 pounds was 27 pounds higher than 2021 and 126 pounds higher than the 5-year average. In South Carolina, the 2022 yield of 960 pounds is the 2nd highest on record and was 26 pounds lower than 2021 and 118 pounds higher than the 5-year average. At 1,147 pounds, the 2022 Virginia yield was also the 2nd highest yield on record. The 2022 Virginia yield was 37 pounds higher than 2021 and 138 pounds higher than the 5-year average.

Southeast Upland Yields
Pounds per Harvested Acre

	2021	2022	5-Year Average
Alabama	826	938	863
Florida	640	785	680
Georgia	914	975	862
North Carolina	1,017	1,043	917
South Carolina	986	960	842
Virginia	1,109	1,147	1,009
SOUTHEAST	917	978	867

Figure 30 - Southeast Upland Yields

Mid-South Upland Yields
Pounds per Harvested Acre

	2021	2022	5-Year Average
Arkansas	1,248	1,196	1,184
Louisiana	1,011	909	1,000
Mississippi	997	1,079	1,079
Missouri	1,260	1,172	1,238
Tennessee	1,036	1,049	1,067
MID-SOUTH	1,131	1,110	1,123

Figure 31 - Mid-South Upland Yields

Overall, cotton acreage in the Mid-South produced yields slightly below the 5-year average in 2022 (Figure 31). The 2022 Mid-South yield of 1,110 pounds was 21 pounds lower than 2021 and 13 pounds below the 5-year average. In Arkansas, the 2022 yield of 1,196 pounds is the 2nd highest on record and was 52 pounds lower than the record yield in 2021 and was 12 pounds above the 5-year average. The 2022 Louisiana yield of 909 pounds was 101 pounds lower than in 2021 and 90 pounds below the 5-year average. In Mississippi, the 2022 yield of 1,079 pounds was 82 pounds higher than the previous year and the same as the 5-year average. In Missouri, the 2022 yield of 1,172 pounds was 89 pounds lower than 2021 and 66 pounds below the 5-year average. The 2022 Tennessee yield of 1,049 pounds was 12 pounds higher than in 2021 and 18 pounds below the 5-year average.

In the Southwest, the 2022 average yield of 731 pounds was 55 pounds higher than 2021 and 20 pounds above the 5-year average. However, it is important to note that the higher yields per harvested acre were largely the result of the vast majority of dryland acres not being a part of the calculations since they were not harvested. In Texas, the yield of 796 pounds was 130 pounds higher than 2021 and 93 pounds higher than the 5-year average. The Oklahoma yield of 348 pounds was 408 pounds lower than in 2021 and 383 pounds below the 5-year average. At 588 pounds, the Kansas yield was 292 pounds lower than the previous year and 342 pounds below the 5-year average (Figure 32).

Southwest Upland Yields
Pounds per Harvested Acre

	2021	2022	5-Year Average
Kansas	880	588	929
Oklahoma	756	348	730
Texas	666	796	703
SOUTHWEST	676	731	711

Figure 32 - Southwest Upland Yields

The average upland yield in the West was estimated at 1,445 pounds, which was 100

pounds higher than 2021 and 132 pounds above the 5-year average (Figure 33). The Arizona yield of 1,407 pounds was 132 pounds higher than 2021 and 123 pounds above the 5-year average. The California yield of 1,871 pounds was 49 pounds lower than 2021 and 236 pounds higher than the 5-year average. The record 2022 New Mexico yield of 1,280 pounds was 172 pounds higher than 2021 and 259 pounds above the 5-year average.

West Upland Yields
Pounds per Harvested Acre

	2021	2022	5-Year Average
Arizona	1,275	1,407	1,284
California	1,920	1,871	1,635
New Mexico	1,108	1,280	1,021
WEST	1,346	1,445	1,313

Figure 33 - West Upland Yields

The national average ELS yield of 1,277 pounds was 10 pounds below 2021 and 137 pounds below the 5-year average (Figure 34). Accounting for the majority of ELS acres, California heavily influences the U.S. average and had a yield of 1,494 pounds in 2022. The 2022 California yield was 7 pounds lower than the previous year and 43 pounds below the 5-year average. At 833 pounds, ELS yields in Arizona were 149 pounds lower than 2021 and 114 pounds below the 5-year average. New Mexico's 2022 record yield of 1,098 pounds was 458 pounds higher than 2021 and 356 pounds above the 5-year average. The 2022 Texas ELS yield of 768 pounds was 12 pounds lower than 2021 and 33 pounds below the 5-year average.

ELS Yields
Pounds per Harvested Acre

	2021	2022	5-Year Average
Arizona	982	833	947
California	1,501	1,494	1,537
New Mexico	640	1,098	742
Texas	780	768	801
U.S.	1,287	1,277	1,414

Figure 34 - ELS Yields

2022 Production

The January 2023 USDA estimate places the 2022 U.S. cotton crop at 14.7 million bales (Figure 35), down 2.8 million bales from 2021. The 2022 crop represents a 3.6 million bale decline relative to the 5-year average. Upland production was estimated at 14.2 million bales, and ELS growers harvested 474 thousand bales.

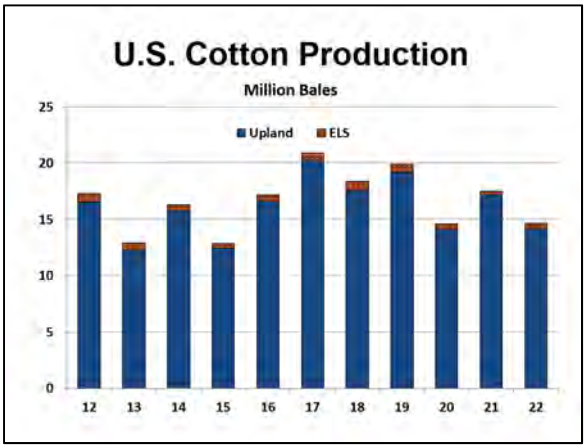


Figure 35 - U.S. Cotton Production

In 2022, the Southeast produced 5.4 million bales, accounting for 37.7% of the total upland crop (Figure 36). The region's 2022 crop was up by 966 thousand bales from the 2021 total and 765 thousand bales above the 5-year average. For 2022, Alabama production of 840 thousand bales was 150 thousand bales higher than 2021 and 10 thousand bales above the 5-year average. In Florida, 2022 production of 170,000 bales

was 50 thousand bales higher than 2021 and 33 thousand bales above the 5-year average. For Georgia, 2022 production of 2.6 million bales was 390 thousand bales higher than 2021 and 338 thousand bales above the 5-year average. The 2022 North Carolina production of 1.0 million bales was 227 thousand bales higher than 2021 and 244 thousand bales above the 5-year average. The 2022 South Carolina production of 530 thousand bales was 105 thousand bales higher than 2021 and 108 thousand bales above the 5-year average. In Virginia, 2022 production of 215 thousand bales was 44 thousand bales higher than 2021 and 32 thousand bales above the 5-year average.

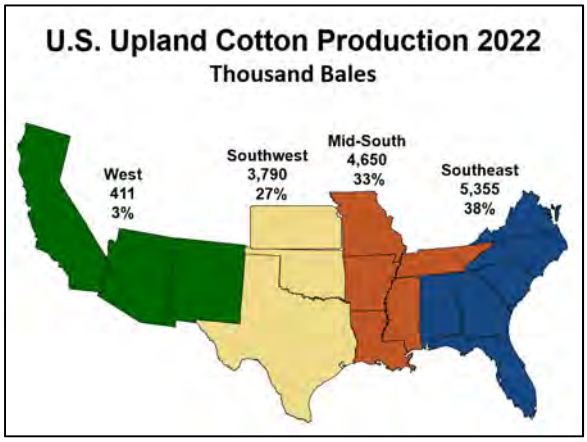


Figure 36 - U.S. Upland Cotton Production

For 2022, the Mid-South accounted for 32.7% of the total U.S. upland crop with 4.7 million bales. The Mid-South crop was 906 thousand bales higher than 2021 and 163 thousand bales above the 5-year average. For Arkansas, 2022 production of 1.6 million bales was 335 thousand bales higher than 2021 and 325 thousand bales higher than the 5-year average. For Louisiana, 2022 production of 360 thousand bales was 141 thousand bales higher than 2021 and 33 thousand bales below the 5-year average. The 2022 Mississippi production of 1.2 million bales was 287 thousand bales higher than 2021 and 121 thousand bales below the 5-year average. The 2022 Missouri production of 830 thousand bales was 16 thousand bales higher than 2021 and 13 thousand bales above the 5-year average. In Tennessee, the 2022 production of 710 thousand bales was 127 thousand bales higher than in 2021 and 21 thousand bales below the 5-year average.

At 3.8 million bales, production in the Southwest accounted for 26.7% of the U.S. upland crop as compared to 49.9% in 2021. The 2022 Southwest production was at the lowest level since 2011. The 4.8 million bale decline from 2021 resulted from the record level of abandonment due to the severe drought. Texas production of 3.4 million bales was 4.3 million bales lower than 2021 and 3.5 million bales lower than the 5-year average. In Oklahoma, 2022 production of 210 thousand was 483 thousand bales lower than the previous year and 528 thousand bales below the 5-year average. Kansas production of 180 thousand bales in 2022 was 7 thousand bales below 2021 and 81 thousand bales below the 5-year average.

The West produced 411 thousand bales of upland cotton in 2022, down 67 thousand bales from the region's 2021 crop and 225 thousand bales below the 5-year average. The region accounted for 2.9% of U.S. production.

The 2022 ELS crop of 474 thousand bales was 142 thousand bales higher than 2021, and 139 thousand bales lower than the 5-year average. At 358 thousand bales, the California ELS crop was 86 thousand bales higher than 2021 and 192 thousand bales below the 5-year average due to decreased acreage (Figure 37). The state accounted for 75.5% of the total 2022 U.S. ELS crop. Arizona's ELS crop increased slightly to 25 thousand bales, while the Texas crop increased to 48 thousand bales due to higher acreage. New Mexico's production of 43 thousand bales was 27 thousand bales higher than in 2021 and 30 thousand bales above the 5-year average.

Figure 37 - U.S. ELS Cotton Production

2022 Stock Levels

The carryout from the 2021 marketing year, and equivalent carry-in or beginning stocks for the 2022 marketing year, was 3.8 million bales (Figure 38). That represented an increase of 600 thousand bales from the stocks that were brought into the 2021 marketing year. Upland stocks totaled 3.7 million bales and ELS stocks stood at 24 thousand bales.

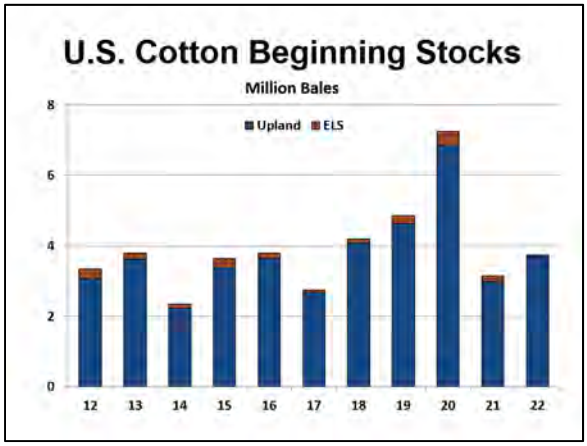


Figure 38 - U.S. Cotton Beginning Stocks

Weak demand and lower cotton prices are expected to lead to an increase in total CCC loan stocks. More bales will likely be placed under the loan over the next few months as ginning nears completion.

As of January 31, 2023, outstanding upland CCC loan stocks were 4.4 million bales (Figure 39), up from 4.1 million bales on January 31, 2022. As of the end of January, the Mid-South accounts for 58.0% of cotton placed under loan, the Southwest accounts for 7.3%, the Southeast accounts for 32.8%, and the remaining 1.9% in the West.

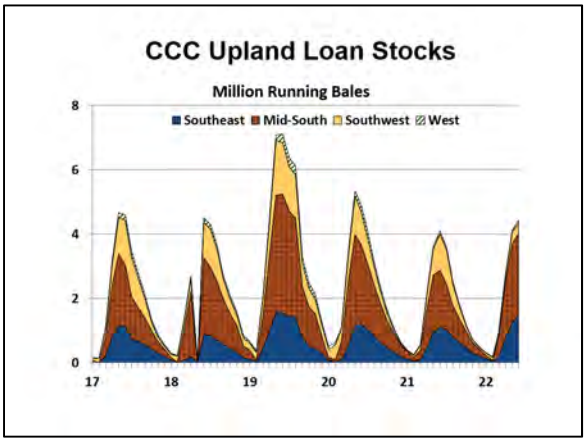


Figure 39 - CCC Upland Loan Stocks

2022 Total Supply

Total supply for the 2022 marketing year was estimated to be 18.4 million bales, down 2.2 million bales from the previous year (Figure 40). The reduced supplies are due to lower beginning stocks and lower production. Total supplies for the 2022 marketing year are 4.3 million bales below the 5-year average.

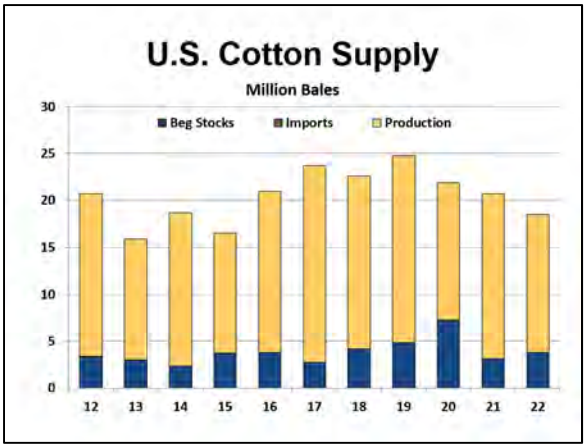


Figure 40- U.S. Cotton Supply

2022 Upland Cotton Quality

With 13.8 million 480-pound upland bales classed through February 2, the national

average staple length (measured in thirty-second's of an inch) was 36.9, up from a 5-year average of 36.7 (Figure 41). The Southeast staple length of 36.7 was the same as the 5-year average. In the Mid-South, the average staple length of 37.6 was also the same as the 5-year average. The Southwest's average staple length of 36.2 was slightly higher than the 5-year average of 35.9. The West reports an average staple length of 37.4, which is slightly higher than the 5-year average of 37.3.

2022 Crop Staple and Strength

	Staple		Strength	
	2022	5-Year	2022	5-Year
Southeast	36.7	36.7	30.5	29.9
Mid-South	37.6	37.6	30.8	30.8
Southwest	36.2	35.9	30.6	30.2
West	37.4	37.3	32.1	31.9
U.S.	36.9	36.7	30.7	30.2

Figure 41 - Crop Staple and Strength

The average strength of the 2022 upland crop was 30.7 grams per tex (gpt). The highest strength occurred in the West, with an average of 32.1 gpt, above the 5-year average of 31.9. At 30.5 gpt, the Southeast was higher than the 5-year average of 29.9 gpt. The Southwest crop has an average strength of 30.6 gpt, which was higher than the 5-year average of 30.2. In the Mid-South, an average strength of 30.8 gpt was the same as the 5-year average.

Color grades for the 2022 crop were much higher than previous years. In total for the Cotton Belt, 92.2% of the 2022 crop was grading 41 or better as compared to the 5-year average of 82.8% (Figure 42). In the Southeast, 92.2% of the 2022 crop was grading 41 or better as compared to the 5-year average of 85.6%. At 96.7%, the Mid-South was higher than their 5-year average of 89.2%. In the Southwest, 85.6% of the 2022 crop was grading 41 or better as compared to the 5-year average of 79.8%. In the West, 95.1% of the 2022 crop was grading 41 or better as compared to the 5-year average of 92.3.

2022 Crop Color and Mike

	%SLM+		Micronaire	
	2022	5-Year	2022	5-Year
Southeast	92.2	85.6	4.4	4.5
Mid-South	96.7	89.2	4.5	4.6
Southwest	85.6	79.8	4.1	4.6
West	95.1	92.3	4.5	4.8
U.S.	92.2	82.8	4.3	4.5

Figure 42 - Crop Color and Mike

The average micronaire of the 2022 upland cotton crop was 4.3, which was below the 5-year average of 4.5. In the Southeast, the average micronaire was 4.4, below their 5-year average of 4.5. In the Mid-South, the average micronaire was 4.5, below their 5-year average of 4.6. In the Southwest, the average micronaire was 4.1, below the 5-year average of 4.6. In the West, the average micronaire was 4.5, below their 5-year average of 4.8.

Cottonseed Situation

Cottonseed Supply

The USDA estimate for 2022 cottonseed production was 4.5 million tons, down 0.9 million tons from the previous year (Figure 43). The changes in cottonseed production generally mirror the movements in cotton lint production as average seed-to-lint ratios have remained relatively stable in recent years. From a longer-term perspective, seed-to-lint ratios, recently ranging between 1.26 and 1.31, are down over the past 15 years from a range of 1.55 to 1.60. For the 2022 marketing year, the estimated seed-to-lint ratio was 1.26.

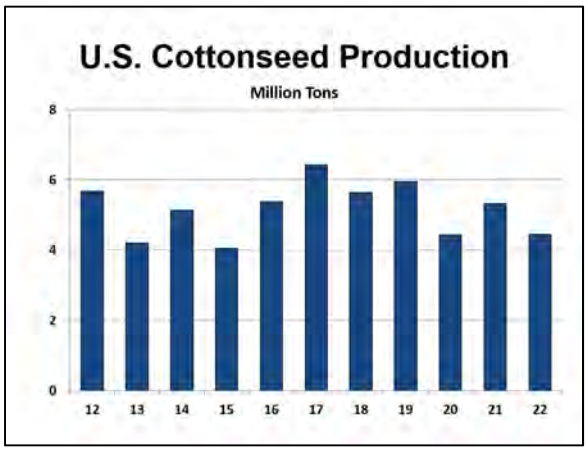


Figure 43 - U.S. Cottonseed Production

For the 2022 crop, a regional breakdown of production shows that the Mid-South produced 1.5 million tons or 34.2% (Figure 44). They were followed by the Southeast with production of 1.5 million tons or 32.9%. The Southwest produced 1.2 million tons or 26.6% of the total and the West accounted for 286 thousand tons, 6.4% of the total.

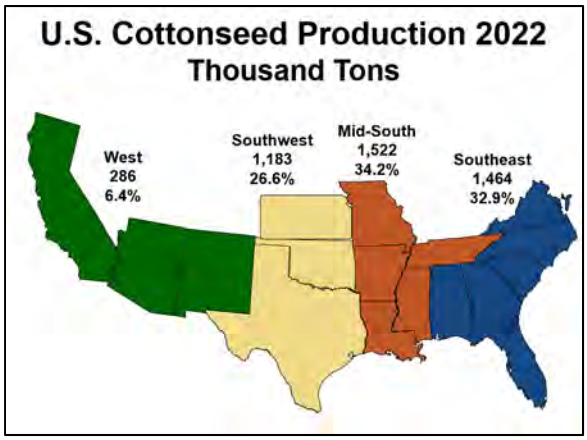


Figure 44 - U.S. Cottonseed Production

Supplementing U.S. production, beginning stocks of 395 thousand tons bring total cottonseed supplies for the 2022 marketing year to 4.9 million tons (Figure 45). Total supplies for 2022 were down by 839 thousand tons from the previous year. The 2022 total supply was 1.1 million bales lower than the 5-year average.

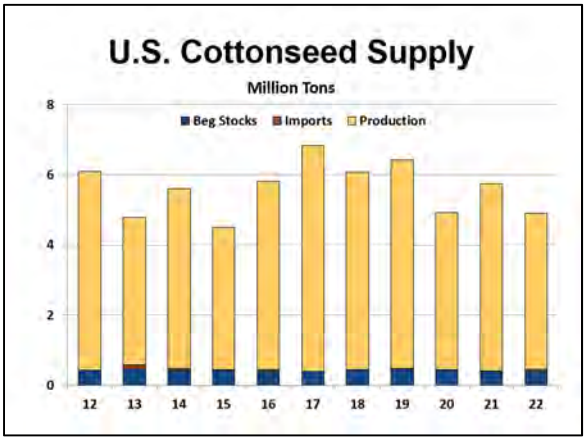


Figure 45 - U.S. Cottonseed Supply

Disappearance and Stock Levels

The January 2023 USDA estimate for cottonseed disappearance showed a crush level of 1.5 million tons for the 2022 marketing year (Figure 46). With lower supplies in 2022, whole seed feeding was estimated at 2.7 million tons as compared to 3.5 million tons in 2021.

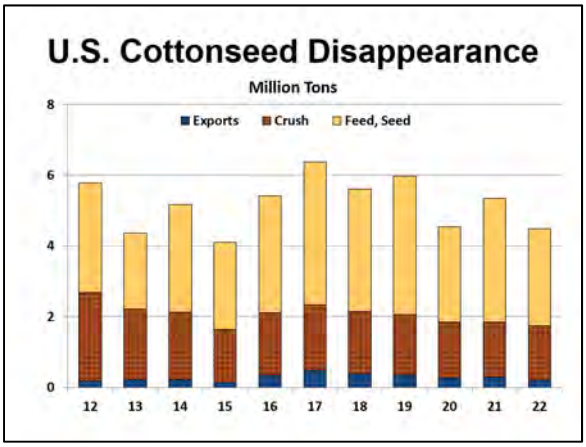


Figure 46 - U.S. Cottonseed Disappearance

For 2022, cottonseed stocks are expected to be 423 thousand tons as compared to 395 thousand tons in 2021 (Figure 47).

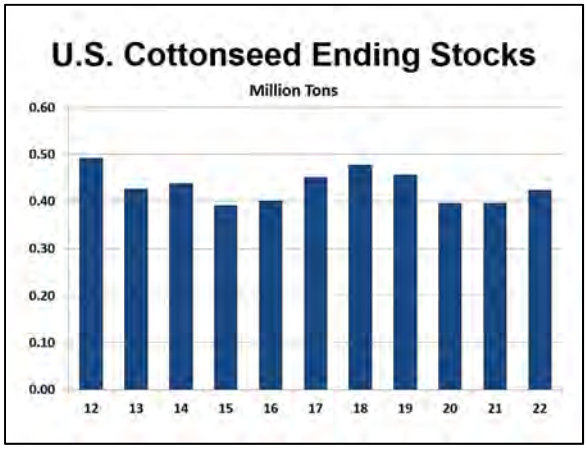


Figure 47 - U.S. Cottonseed Ending Stocks

2022 Cotton Prices

Upland Cotton Prices

Cotton futures prices traded much higher in the first half of 2022 as compared to 2021. During the first half of 2022, cotton futures prices averaged about 130 cents per pound, reaching almost 160 cents per pound in May. In the second half of the year, prices averaged about 94 cents per pound. The nearby NY futures contract dropped to 82.6 cents by the end of year, with the "A" Index trading at 99.3 cents per pound (Figure 48). The nearby New York futures and the world cotton price, as measured by Cotlook Ltd.'s "A" Index maintained a relationship consistent with historical experience.

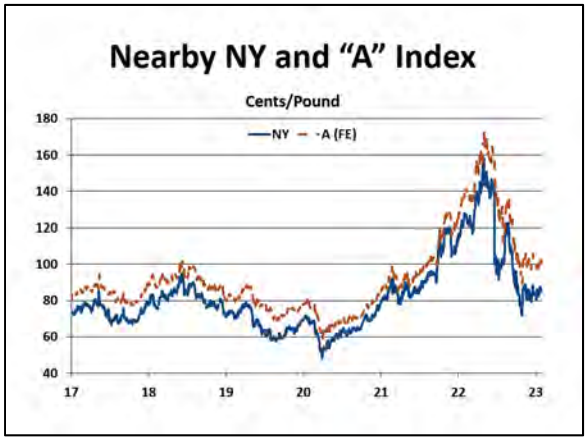


Figure 48 - Nearby NY and "A" (FE) Index

Thus far in the 2022 marketing year (Aug-early Feb), the nearby NY futures contract has averaged 91.8 cents per pound. During the 2021 marketing year, the average nearby NY futures price was 117.5 cents per pound. In early February, the nearby NY futures contract was trading at 85.6 cents per pound, with the "A" index trading at 101.0 cents per pound.

Spot prices in the U.S. followed a similar pattern to the futures market and the "A" Index. For the 2022 marketing year, spot prices averaged 92.2 cents/lb. from August to January. The average spot price in January 2023 was 82.5 cents per pound. The average spot price in January 2022 was 115.9 cents per pound (Figure 49).

Figure 49 - Spot 4134 Price

ELS Cotton Prices

ELS cotton prices began 2022 at $2.90 per pound and ended the year at $2.80 per pound (Figure 50). Lower supplies have supported prices during the 2022 crop year. In January 2023, ELS prices dropped to $2.40 per pound.

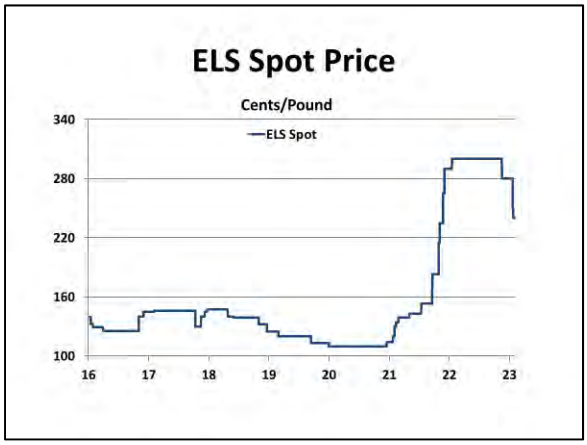


Figure 50 - ELS Spot Price

Cottonseed Prices

The movement in cottonseed prices reflects changes in competing feed prices as well as available supplies (Figure 51). The average cottonseed spot price is a weighted average of the four production regions. In 2022, cottonseed prices traded higher than in 2021. The national marketing year average cottonseed spot price was $342 per ton in 2021 as compared to $368 per ton in 2022 (based on the August 2022 – January 2023 average). On a regional basis, the average January 2023 spot price was $297 per ton in the Southeast, $355 per ton in the Mid-South, and $450 per ton in the Southwest.

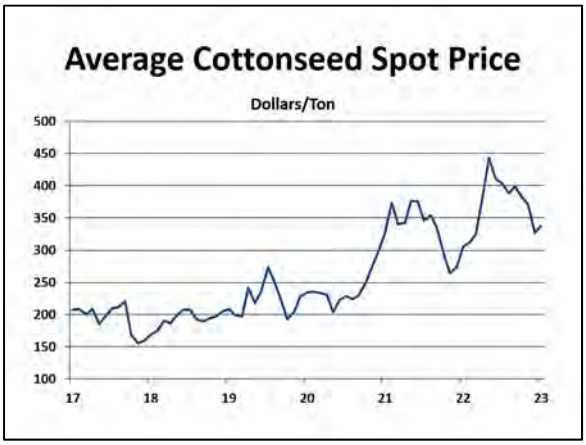


Figure 51 - Average Cottonseed Spot Price

It is important to note that the cottonseed FOB delivered spot prices will range from $25 to $100 per ton above the cottonseed farmgate prices reported by NASS.

2023 Planting Intentions

In consideration of their 2023 planting decisions, growers will compare prices for cotton, corn, soybeans, and other regional crops. Growers will also be influenced by production costs for cotton and other crops. While final acreage decisions are influenced by expected returns of cotton and competing crops, farmers will also take into account weather and agronomic considerations such as crop rotation.

Price Prospects

As we look ahead to the 2023 planting season, cotton harvest-time futures contracts are currently trading at lower levels than last year. During the 2023 survey period, the average December NY futures price for cotton was $0.81 per pound as compared to $0.94 during the 2022 survey period (Figure 52). In early February 2023, futures prices had increased to $0.86 per pound as compared to $1.03 per pound a year ago.

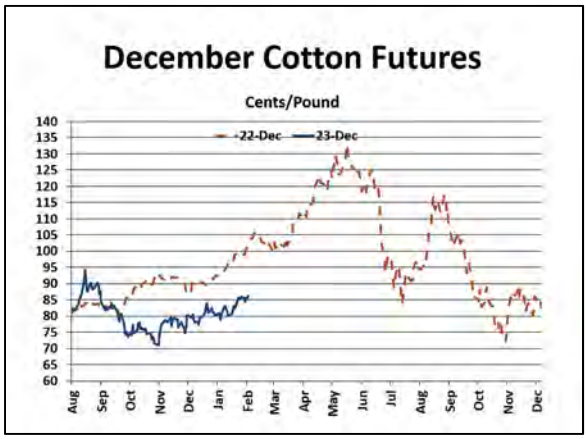


Figure 52 - December Cotton Futures

Corn prices increased during the first half of 2022 before trading in a more volatile sideways pattern during the second half of year. During the 2023 survey period, the average December 2023 CBOT futures price for corn was $5.99 per bushel (Figure 53). Prices dropped slightly to $5.96 per bushel in early February 2023 as compared to $5.68 per bushel a year ago.

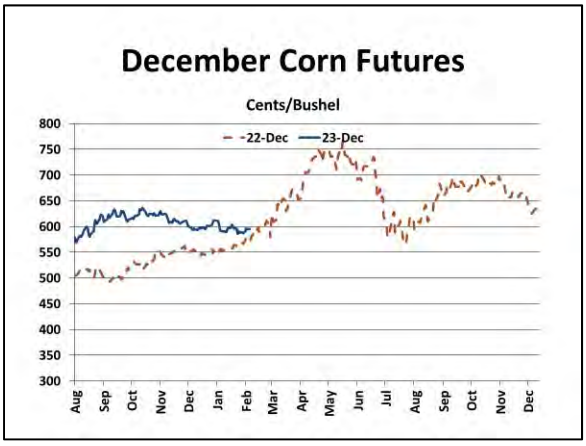


Figure 53 - December Corn Futures

Soybean prices, as measured by the Chicago Board of Trade November futures contract, increased during the first half of 2022, and trended upward during the second half. During the 2023 survey period, the average November 2023 CBOT futures price for soybeans was $13.94 (Figure 54). In early February 2023, prices declined slightly to $13.68 per bushel as compared to $13.93 per bushel a year ago.

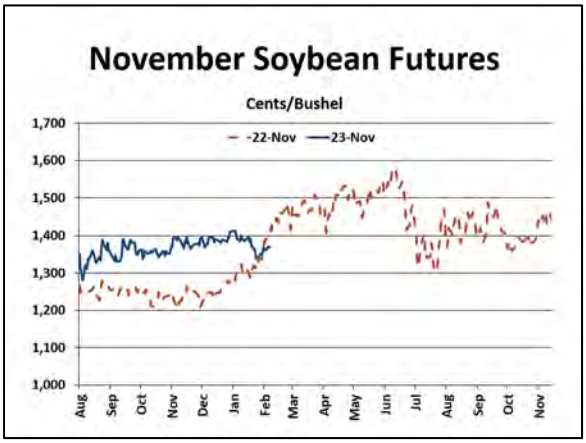


Figure 54 - November Soybean Futures

Relative to the average cotton futures price in January-March 2022 ($101.5), the average futures price during the Dec. 15, 2022 – Jan. 16, 2023 survey period ($0.81) was down by 19.8%, corn prices were trading about 0.6% lower ($6.03 Jan-Mar

2022 average, $5.99 - 2023 survey period), and soybean prices were trading about 1.0% lower ($14.09 Jan-Mar 2022 average, $13.94 - 2023 survey period).

2023 U.S. Cotton Acreage Intentions

In mid-December 2022, the NCC distributed the annual early season planting intentions survey. Respondents were asked to provide their plantings of cotton, corn, soybeans, wheat, and 'other crops' for 2022 and intended acreage for 2023. As always, the survey results should be viewed as a measure of grower intentions prevailing at the time the survey was conducted. Changing climate and market conditions could cause actual plantings to be significantly different from growers' stated intentions.

The 2023 survey period was December 15, 2022 – January 16, 2023. For the 2023 survey period, the cotton-to-corn and cotton-to-soybean price ratios were at the lowest level since 2009 (cotton-to-corn: 2022-16.9, 2023-13.5; cotton-to-soybean: 2022-7.2, 2023-5.8).

It is important to call attention to the ratios because experience has shown that these ratios are reliable indicators of changes in cotton acreage. Historical data over the past 10 years shows a clear relationship between the price ratios and changes in cotton acreage. An increase in the price ratio generally indicates an increase in cotton acreage. A review of the Council's survey will begin with a look at the Southeast.

In the Southeast, survey results indicate a 9.5% decrease in the region's upland area to 2.4 million acres (See Table 4 on page 47). Cotton acreage is expected to decline in all states in the region. In Alabama, the survey responses indicate a 12.9% decrease in cotton acreage to 379 thousand acres. Alabama growers intend to plant more corn, soybeans, wheat, and 'other crops', with soybeans accounting for the largest increase. In Florida, respondents indicated 27.9% less cotton and more corn, soybeans, and 'other crops'. In Georgia, cotton acreage is expected to decrease by 1.1% to 1.3 million acres. Georgia growers expect to plant slightly more corn and 'other crops', likely peanuts.

In North Carolina, an 25.0% decrease in cotton acreage is expected, reducing cotton acreage to 353 thousand acres. North Carolina growers expect to plant more corn, soybeans, wheat, and 'other crops', with soybeans accounting for the largest increase in acreage. In South Carolina, acreage is expected to decrease by 7.8% to 249 thousand acres. South Carolina growers expect to plant more corn, wheat, soybeans and 'other crops'. Virginia cotton acreage is expected to decrease by 14.6% to 78 thousand acres. Virginia growers intend to plant more corn, soybeans, wheat, and 'other crops', with corn accounting for the largest increase in acreage.

In the Mid-South, growers have demonstrated their ability to adjust acreage based on market signals. The relative prices and potential returns of competing crops play a significant role in cotton acreage. Mid-South growers intend to plant 1.7 million acres, a decrease of 16.2% from the previous year.

Across the Mid-South region, all states intend to decrease cotton acreage. In Arkansas, acreage is expected to decrease by 17.7% to 527 thousand acres in 2023. Arkansas growers expect to plant more corn, soybean, wheat and 'other crops'. In Arkansas, both corn and soybeans accounted for larger increases in acreage. Louisiana growers expect to plant 156 thousand acres, which is 19.8% lower than last year. Louisiana growers expect to plant more corn and 'other crops' in 2023, with corn accounting for the largest increase in

acreage. In Mississippi, respondents expect to plant 374 thousand acres, which is 29.4% lower than last year. Mississippi respondents expect to plant more corn, wheat, and soybeans, with corn accounting for the largest increase in acreage. Missouri growers expect to decrease cotton acres by 0.7% to 357 thousand acres. Missouri growers expect to plant more corn, soybeans, and 'other crops'. In Missouri, corn accounts for the largest increase in acreage. In Tennessee, cotton acreage is expected to decrease by 7.0% to 312 thousand acres. Tennessee growers expect plant more corn, soybeans, and wheat in 2023. In Tennessee, soybean acreage accounts for the largest increase in 2023.

Growers in the Southwest intend to plant 7.0 million acres of cotton, a decrease of 19.6%. Kansas growers expect to plant slightly more cotton in 2023 while Texas and Oklahoma growers intend to plant less cotton. In Kansas, producers intend to plant 1.7% more cotton acres in 2023 to reach 168 thousand acres. Kansas growers also intend to plant more 'other crops', likely sorghum. Oklahoma producers expect to reduce cotton acreage by 5.8% to 631 thousand acres. Oklahoma producers expect to plant more wheat and more 'other crops'. Overall, Texas acreage is expected to decrease by 21.2% to 6.2 million acres.

In south Texas, respondents indicate a 26.7% decrease in cotton acreage. South Texas growers intend to plant more corn, wheat, and 'other crops', likely sorghum. Respondents from the Blacklands also indicated a decrease of 26.7% in cotton acreage, and an increase in corn and 'other crops', likely sorghum. In West Texas, respondents indicated a 23.3% decrease in cotton. West Texas growers expect to plant more corn, wheat, and 'other crops', likely sorghum. In West Texas, wheat acreage accounted for the largest increase.

With intentions of 115 thousand acres, producers in the West expect to plant 33.7% less acres of upland cotton. If realized, this would be the lowest level on record for Arizona and California. Drought conditions and water availability issues continue to impact growers in the West. Upland cotton acreage is expected to decrease in all states in the region. The survey results for Arizona suggest a 10.9% decrease in upland cotton to 78 thousand acres, more ELS cotton and corn and less wheat and 'other crops'. In California, growers intend to plant 43.3% less upland cotton, or 11 thousand acres. California growers also expect to plant less ELS cotton and more corn, wheat, and 'other crops'. In New Mexico, upland cotton acreage is expected to decrease by 61.7% in 2023. The large decline in New Mexico is partially attributed to the 80.1% increase in upland acreage from 2021 to 2022 as well as an increase in ELS acreage for 2023. New Mexico growers intend to plant more ELS cotton in 2023. Summing across the 4 regions gives intended 2023 upland cotton area of 11.2 million acres, 17.3% below 2022.

Overall, the survey indicates that growers intend to plant 0.5% more ELS cotton in 2023. Arizona growers expect to plant 15.9% more ELS cotton in 2023, while California growers expect to plant 8.5% less ELS cotton. In New Mexico, ELS acreage is expected to increase by 12.0%, while Texas growers expect to increase ELS acreage by 18.2%. Overall, U.S. cotton growers intend to plant 184 thousand ELS acres in 2023. Summing together the upland and ELS cotton intentions shows U.S. all-cotton plantings in 2023 of 11.4 million acres, 17.0% lower than in 2022.

Figure 55 - U.S. Planted Area

2023 U.S. Cotton and Cottonseed Supply

In the past year, U.S. cotton producers have struggled with high production costs, supply chain disruptions, and the resulting financial hardships. Overall, production costs remain elevated and are only slightly lower than in 2022. Cotton producers will face difficult economic conditions in 2023 as cotton prices have fallen while production costs remain at elevated levels. However, while cotton futures prices in early February 2023 are 16.5% lower than a year ago, the prices of most competing commodities are at almost the same level as a year ago. This is reflected in the 2023 survey results as many growers indicated a shift away from cotton to other competing commodities.

Planted acreage is just one of the factors that will determine supplies of cotton and cottonseed. Ultimately, weather, insect pressures, and agronomic conditions play a significant role in determining crop size. Since the NCC economic outlook does not attempt to forecast weather patterns, the standard convention is to assume yields in line with recent trends and abandonment consistent with historical averages. Also, it is important to remember the volatility around projected production given the uncertainty of weather patterns.

To estimate U.S. production for 2023, the 5-year average (2018-2022) abandonment rate and yield was used for most states. In the Southwest, adjustments were applied to the 5-year average values to account for the 2022 experience as well as current drought conditions. The 5-year average abandonment rate for Florida was also adjusted downward to account for the abnormally high level of abandonment in 2018.

For 2023, U.S. harvested area is estimated to be 8.8 million acres with an overall abandonment rate of 22.6% (Figure 56). U.S. production is estimated to be 15.7 million bales with an average yield of 853 pounds per acre, which includes 15.2 million upland bales and 466,000 ELS bales.

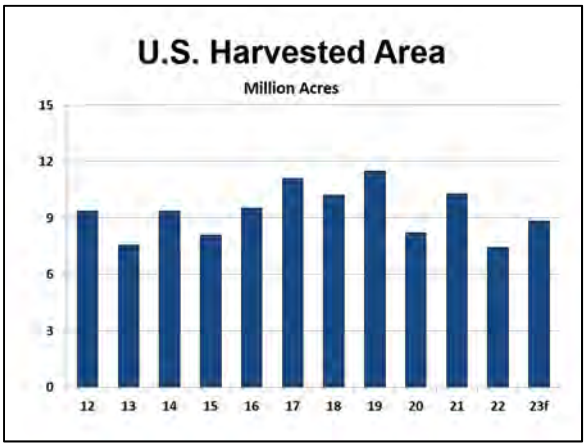


Figure 56 - U.S. Harvested Area

Combining projected production with expected beginning stocks of 4.4 million bales and imports of 3 thousand bales gives a total U.S. supply of 20.1 million bales (Figure 57). This is an increase of 1.7 million bales from the 2022 level.

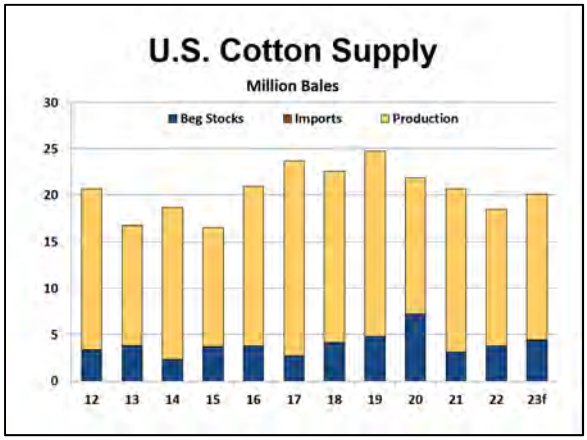


Figure 57 - U.S. Cotton Supply

For cottonseed, multiplying the point estimate of lint production by an average lint-seed ratio generates expected production of 4.8 million tons in the 2023 marketing year. With 423 thousand tons of beginning stocks, 2023 cottonseed supply totals 5.2 million tons (Figure 58).

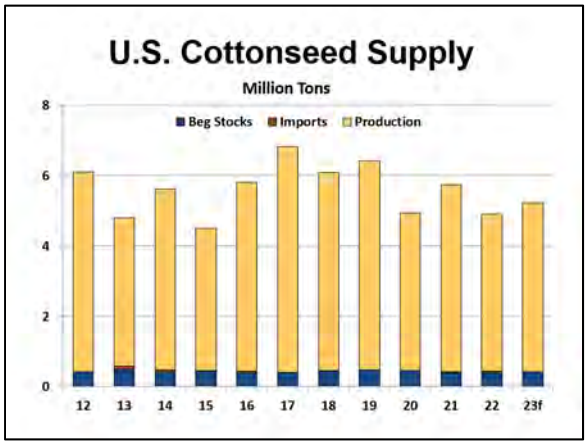


Figure 58 - U.S. Cottonseed Supply

Table 4 - Prospective 2023 U.S. Cotton Area

	2022 Actual (Thou.) 1/	2023 Intended (Thou.) 2/	Percent Change
SOUTHEAST	**2,662**	**2,410**	**-9.5%**
Alabama	435	379	-12.9%
Florida	106	76	-27.9%
Georgia	1,290	1,275	-1.1%
North Carolina	470	353	-25.0%
South Carolina	270	249	-7.8%
Virginia	91	78	-14.6%
MID-SOUTH	**2,060**	**1,727**	**-16.2%**
Arkansas	640	527	-17.7%
Louisiana	195	156	-19.8%
Mississippi	530	374	-29.4%
Missouri	360	357	-0.7%
Tennessee	335	312	-7.0%
SOUTHWEST	**8,685**	**6,984**	**-19.6%**
Kansas	165	168	1.7%
Oklahoma	670	631	-5.8%
Texas	7,850	6,185	-21.2%
WEST	**173**	**115**	**-33.7%**
Arizona	88	78	-10.9%
California	20	11	-43.3%
New Mexico	65	25	-61.7%
TOTAL UPLAND	**13,580**	**11,235**	**-17.3%**
TOTAL ELS	**183**	**184**	**0.5%**
Arizona	15	17	15.9%
California	116	106	-8.5%
New Mexico	19	21	12.0%
Texas	33	39	18.2%
ALL COTTON	**13,763**	**11,419**	**-17.0%**

1/ USDA-NASS
2/ National Cotton Council

U.S. Market

U.S. Textile Industry

Preliminary data from the U.S. Bureau of Labor Statistics indicate that textile industry employment in 2022 decreased by approximately 7,800 workers. These figures represent employment in all three sectors of the U.S. textile industry - textile mills, textile product mills, and apparel mills.

Mill Use

Cotton mill use decreased from the previous year to an estimated 2.4 million bales in calendar 2022, 3.2% below 2021 (Figure 59). For calendar 2023, NCC forecasts domestic mill use of cotton at 2.1 million bales. NCC projects domestic mill use of cotton at 2.3 million bales for the 2023 marketing year, slightly above the 2022 estimate of 2.2 (Figure 60). U.S. mills continue to be important and consistent customers of U.S. cotton.

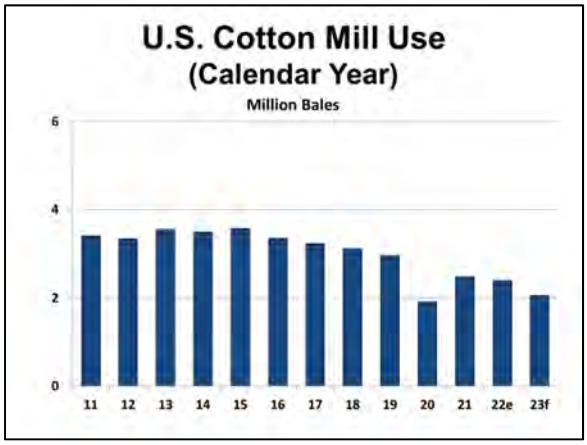


Figure 59 - U.S. Cotton Mill Use (Calendar Year)

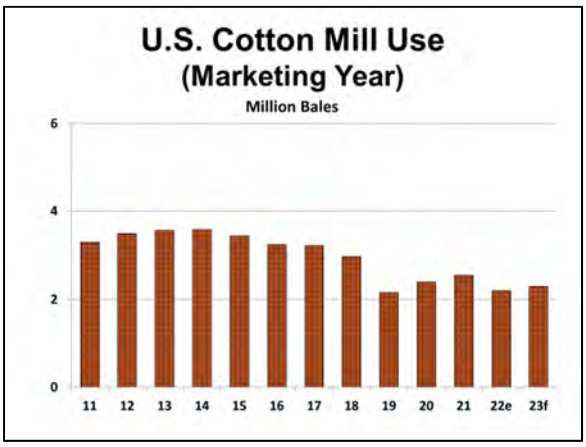


Figure 60 - U.S. Cotton Mill Use (Marketing Year)

Economic Adjustment Assistance for Textile Mills

The Economic Adjustment Assistance for Textile Mills (EAATM), reauthorized and renamed in the 2018 Farm Bill, has provided U.S. cotton textile manufacturers with much-needed assistance for capital investments and improvements.

Under the EAATM, domestic users receive 3 cents per pound for all upland cotton consumed. Recipients must agree to invest the EAATM proceeds in plants and equipment. For fiscal year 2023, 34 U.S. companies were approved to receive payments under the EAATM.

Net Domestic Consumption

Net domestic consumption is a measure of the size of the U.S. retail market. It measures both cotton spun in the U.S. (mill use) and cotton consumed through textile imports. Net domestic consumption of cotton in 2022 was estimated to be 19.4 million bale equivalents (Figure 61). For 2023, NCC projects net domestic consumption of cotton to decrease to 19.2 million bales.

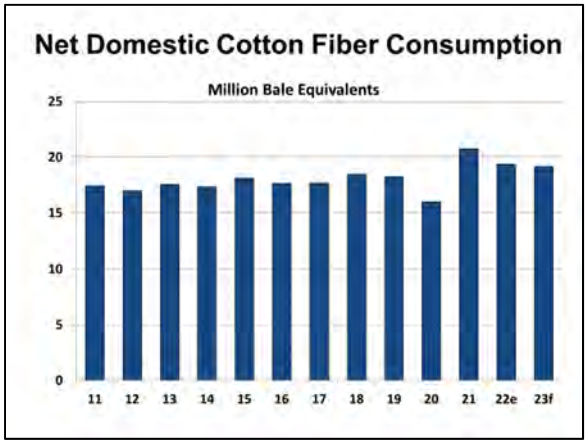


Figure 61 - Net Domestic Cotton Consumption

Imported goods make up the largest portion of U.S. net domestic consumption. Imported cotton textiles decreased from 21.1 million bale equivalents in 2021 to an estimated 20.0 million in 2022 (Figure 62).

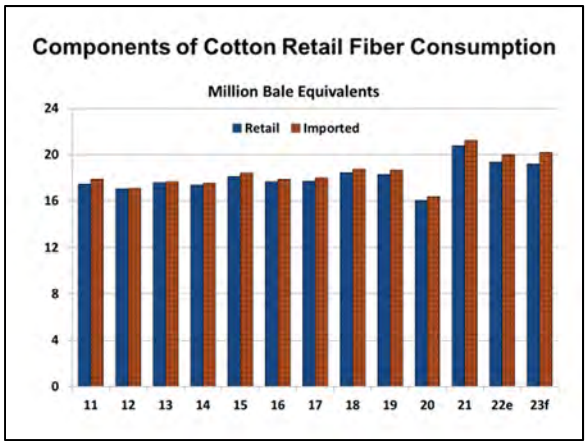


Figure 62 - Components of Retail Cotton Consumption

Textile Trade

Imports of cotton goods in calendar 2022 were estimated to have decreased by 5.9% to 20.0 million bale equivalents (Figure 63). In calendar 2023, NCC projects cotton textile imports to increase to 20.2 million bales.

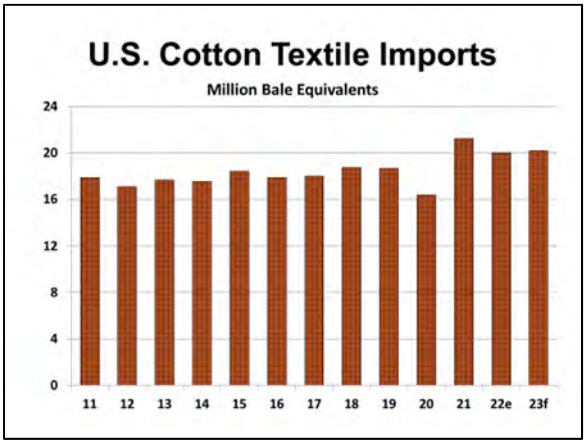


Figure 63 - U.S. Cotton Textile Imports

For textile imports, it is important to consider that a significant portion of imported goods contain U.S. cotton. Since much of the U.S. exports to the USMCA (formerly the North American Free Trade Agreement - NAFTA) and the CBI (Caribbean Basin Initiative) countries is in the form of fabric and piece goods that come back in the form of finished goods, the trade gap is not as wide as implied by gross imports and exports. NCC analysts estimate that 23.9% of all cotton goods imported in 2022 contained U.S. cotton. This was a 0.2% increase from the previous year. In bale equivalents, these imported cotton goods contained 4.8 million bales of U.S. cotton (Figure 64). This was due, in large part, to our trading partners in USMCA and the CBI.

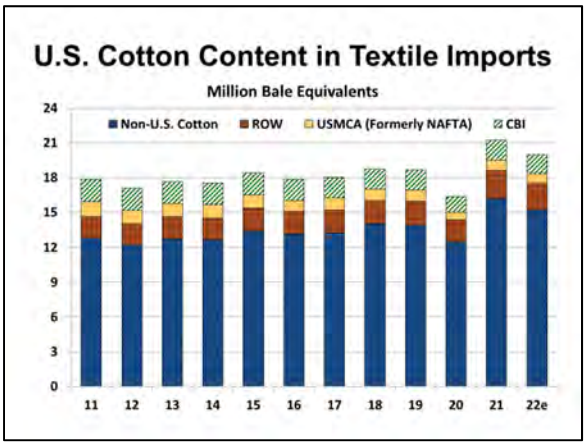


Figure 64 - U.S. Cotton Content in Textile Imports

U.S. Cotton Product Imports

Apparel was once again the largest category of imported cotton goods when compared to yarn, thread and fabric, and home furnishings (Figure 65). Cotton apparel imports were estimated at 14.6 million bale equivalents for 2022, up 2.9% from 2021. Imports of cotton home furnishings (including floor coverings) decreased 27.9% in 2022 to an estimated 3.8 million bale equivalents. Cotton yarn, thread and fabric imports decreased 6.9% in 2022 to an estimated 1.6 million bales.

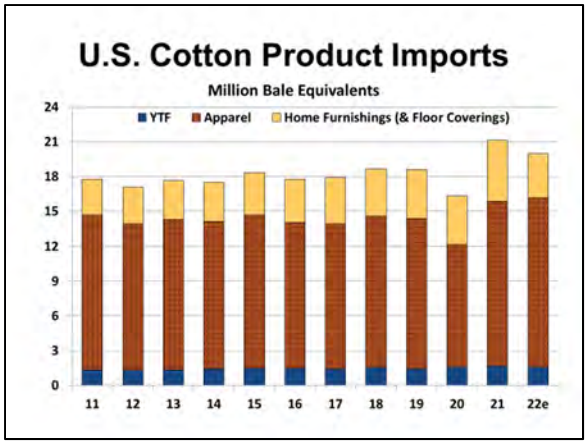


Figure 65 - U.S. Cotton Product Imports

Once again, countries in USMCA and CBI represented significant sources of imported cotton goods in 2022 (Figure 66). Imports from Mexico in 2022 were estimated at 781 thousand bales, down 6.1% from the previous year (Figure 67). Imports of cotton goods from Canada decreased to an estimated 62 thousand bales in 2022, down 14.8% from the previous year (Figure 68). Imported cotton goods from CBI for the year were estimated at 2.4 million bale equivalents (Figure 69), up 4.7% from the previous year. The CAFTA-DR countries of Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and the Dominican Republic are all part of the CBI region. Imports of cotton goods from CAFTA-DR in 2022 were 2.1 million, or 90.5% of the cotton textile imports from CBI. Combined, imports from USMCA and CBI countries increased 1.4% and accounted for 16.1% of total U.S. cotton product imports in 2022.

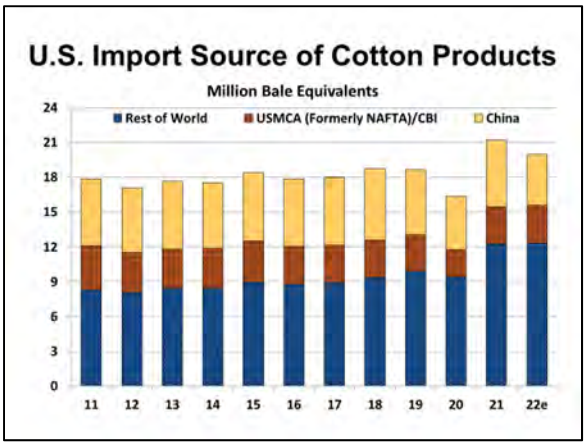


Figure 66 - U.S. Import Source of Cotton Products

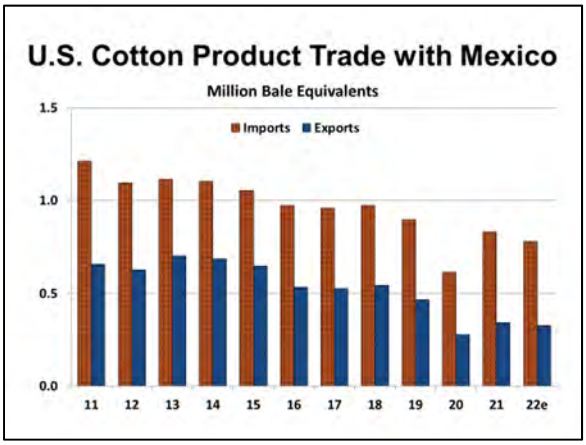


Figure 67 - U.S. Cotton Product Trade with Mexico

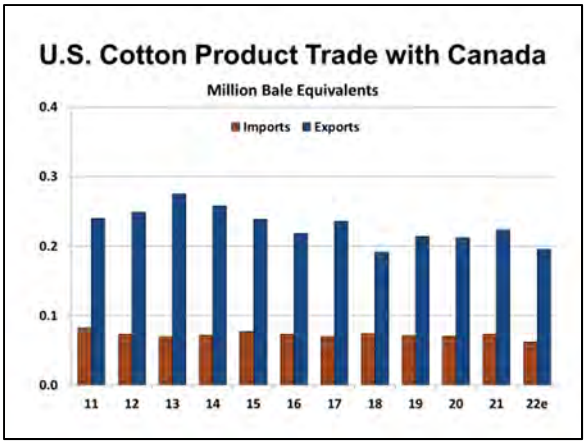


Figure 68 - U.S. Cotton Product Trade with Canada

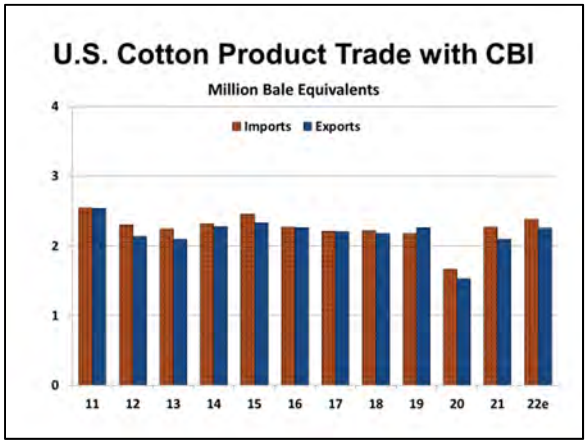


Figure 69 - U.S. Cotton Product Trade with CBI

Other top sources of imported cotton goods in 2022 were China, India, Pakistan, Vietnam, Bangladesh, Indonesia, and South Korea. For the eighteenth consecutive year, China was the largest supplier of cotton textile imports into the U.S. (Figure 70). Total cotton product imports from China decreased to an estimated 4.4 million bale equivalents in 2022, down 23.7% from 2021 but up by 435% from 2001 when China entered the WTO. China's share of imported cotton goods in the U.S. market accelerated from 5.5% in 2001 to an estimated 22.0% in 2022.

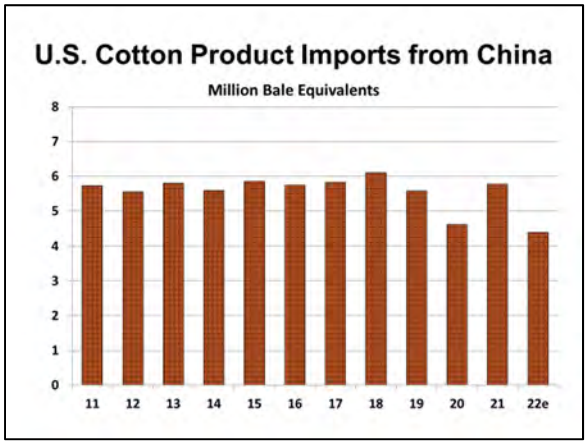


Figure 70 - U.S. Cotton Product Imports from China

Imports of cotton products from Pakistan were estimated at 2.1 million bale equivalents in 2022, a decrease of 118 thousand bales. However, Pakistan's share of imported cotton goods in the U.S. market increased last year to 10.4%.

Imports from India stood at 2.7 million bale equivalents for 2022. This was a 9.3% decrease from last year. India now accounts for 13.3% of all U.S. cotton product imports.

Imports from Indonesia in 2022 were 610 thousand bale equivalents, up 7.1% from 2021. Indonesia's share of imported cotton goods in the U.S. increased to 3.1% in 2022.

Bangladesh showed an increase in cotton product imports into the U.S. when compared to the previous year. Imports from Bangladesh in 2022 were up 11.3% from 2021 to 2.2 million bale equivalents. Bangladesh accounted for an estimated 11.1% of all cotton goods imported into the U.S. in 2022.

Vietnam showed an increase in cotton product imports into the U.S. when compared to the previous year. Total cotton product imports from Vietnam increased to an estimated 1.9 million bale equivalents in 2022, up 2.1% from 2021. Vietnam's share of cotton goods imported into the U.S. in 2022 increased to 9.7%, up 0.8% from the previous year. Cotton product imports from South Korea decreased 3.1% from 2021 to 133 thousand bale equivalents in 2022.

It is important to note in the following discussion that the most reliable data on imports by product category and by country is in the form of square meter equivalents (SME), rather than pounds or bales. Since different products have different weights per square meter, total imports reported in bale equivalents will not necessarily show the same trend as total imports expressed in SME. NCC reports imports in bale equivalents whenever possible, but the measurement of SME best represents product categories imported from individual countries.

Mexico

Although declining relative to other countries, Mexico remained a large shipper of cotton goods to the U.S. in 2022. Cotton trousers remained the largest category of imported cotton goods from Mexico. Trousers accounted for 26.4% of all cotton product imports from Mexico based on SME (Figure 71). Knit cotton shirts were the next largest category of imports, accounting for 16.2%, followed by "other cotton apparel" (12.8%) and "other cotton manufactures" (11.5%). The U.S. Customs Service category "other cotton apparel" includes items such as waistcoats, swimwear, bodysuits, and scarves. The U.S. Customs Service category "other cotton manufactures" includes items such as tablecloths, napkins, dishtowels, and pillow covers.

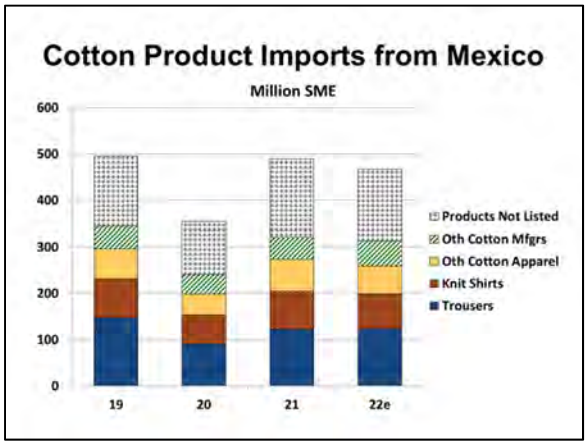


Figure 71 - Cotton Product Imports from Mexico

Canada

U.S. cotton SME imports from Canada decreased slightly in 2022. The largest category of imports from Canada in 2022 was "other cotton manufactures", which accounted for 34.9% of total SME of cotton product imports from Canada (Figure 72). The next largest category was "other cotton apparel" with 15.1% of total imports, followed by knit cotton shirts at 4.2% and cotton trousers at 3.8%.

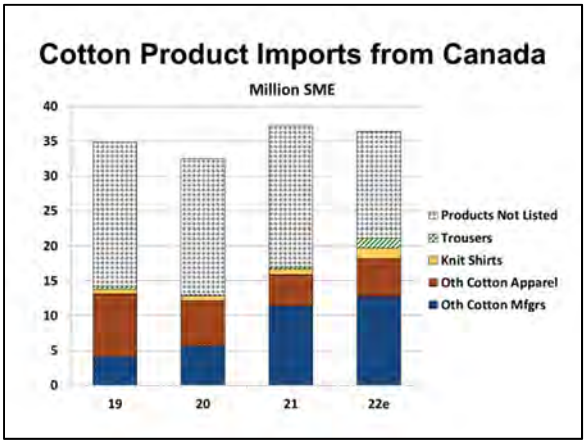


Figure 72 - Cotton Product Imports from Canada

Caribbean Basin Initiative (CBI)

Continuing the trend, CBI countries shipped more cotton goods to the U.S. than did USMCA (formerly NAFTA) countries in 2022. The largest category of imported cotton goods from the region was knit shirts, accounting for 55.1% of total imports, based on SME (Figure 73). Approximately 91.7% of the cotton knit shirt imports from CBI came from the CAFTA-DR countries. Underwear, the second largest category, accounted for 22.2% of imports, followed by cotton trousers (9.5%) and cotton hosiery (5.0%). Of these imports, 82.0% of the underwear, 89.8% of the cotton trousers and 100.0% of the cotton hosiery were from the CAFTA-DR countries.

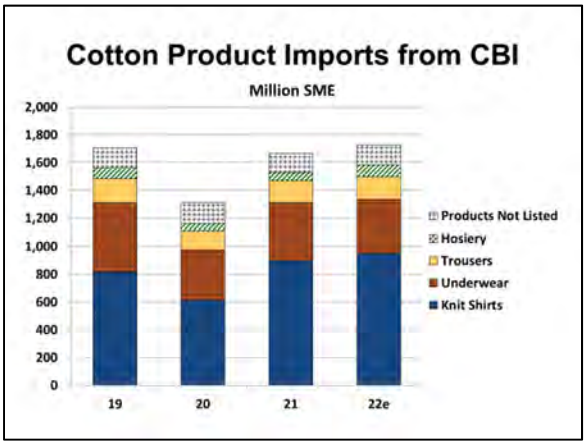


Figure 73 - Cotton Product Imports from CBI

African Growth & Opportunity Act (AGOA)

Over the past year, total cotton apparel product imports from the AGOA region increased by 17.8% to an estimated 175.8 million SMEs (Figure 74). However, over the same time period, the percentage of U.S. cotton apparel imports from the AGOA region receiving preferential treatment under the act decreased significantly from 97.7% to 61.7%.

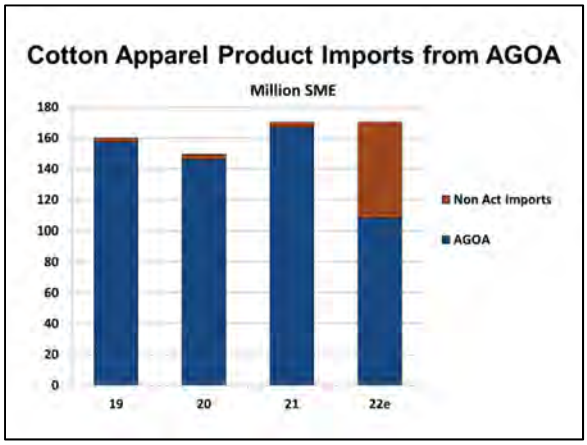


Figure 74 - Cotton Apparel Product Imports from AGOA

Pakistan

The largest category of imported goods from Pakistan in 2022 was "other cotton manufactures" (Figure 75). This category accounted for 39.3% of all cotton product imports from Pakistan based on SME. The second largest category imported from Pakistan was cotton sheets with 12.9% of total imports, followed by cotton trousers (7.2%) and bedspreads and quilts (7.0%).

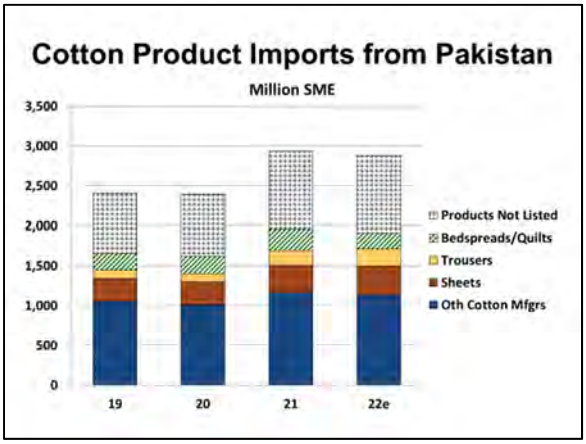


Figure 75 - Cotton Product Imports from Pakistan

China

China remained the single largest supplier of imported cotton goods into the U.S. market last year. On a SME basis, the largest category of cotton product imports from China in 2022 was "other cotton manufactures", which accounted for 29.3% of all cotton product imports from that country (Figure 76). Trousers was the second largest category, comprising 11.8% of total cotton product imports from that country. Nightwear accounted for 6.7% of U.S. cotton textile and apparel imports from China in 2022. "Other cotton apparel" was the fourth largest category and accounted for 5.9% of cotton product imports.

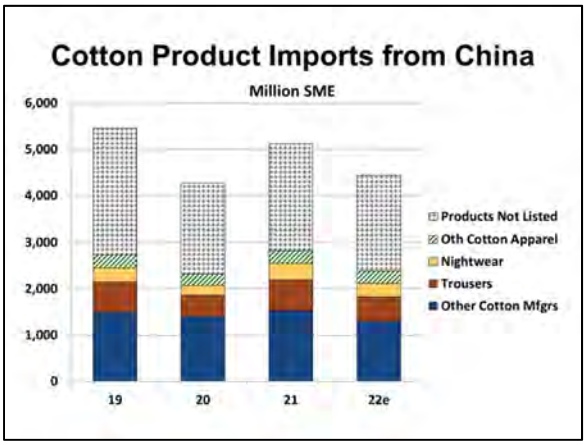


Figure 76- Cotton Product Imports from China

India

As was the case with Pakistan and China, the largest category of imported cotton

goods from India in 2022 was the category of "other cotton manufactures" (Figure 77). When based on SMEs, this category represented 33.3% of all cotton goods imported from India. The next largest category was cotton sheets (8.1%), followed by knit shirts (4.5%) and cotton dresses (4.4%).

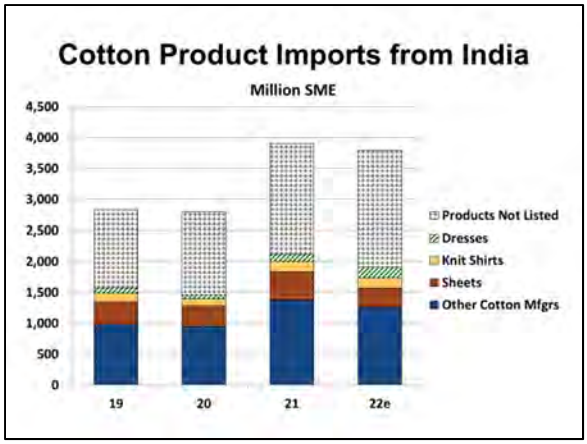


Figure 77 - Cotton Product Imports from India

Indonesia

The largest category of imported cotton goods from Indonesia in 2022 was cotton trousers (Figure 78). When looking at SMEs, cotton trousers accounted for 28.8% of all cotton products imported. The second largest category was cotton knit shirts with 17.8% of imports, followed by cotton dresses (9.4%) and cotton woven shirts (7.4%).

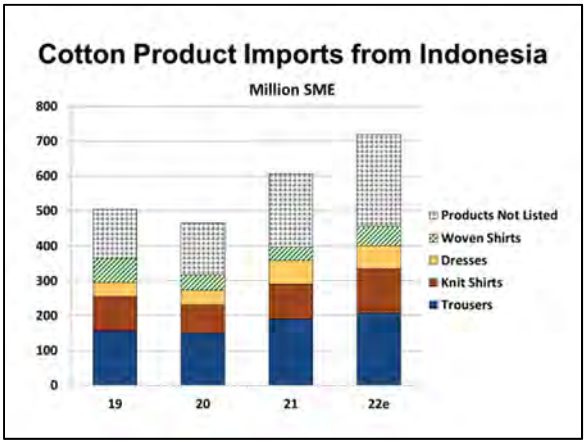


Figure 78 - Cotton Product Imports from Indonesia

Bangladesh

Based on SMEs, the largest category of cotton goods imported from Bangladesh in 2022 (36.9%) was trousers (Figure 79). The second largest category in 2022 was knit shirts (12.6%). Cotton underwear was the third largest category in 2022, representing 10.8% of total cotton goods imported from Bangladesh, followed by woven shirts at 10.0%.

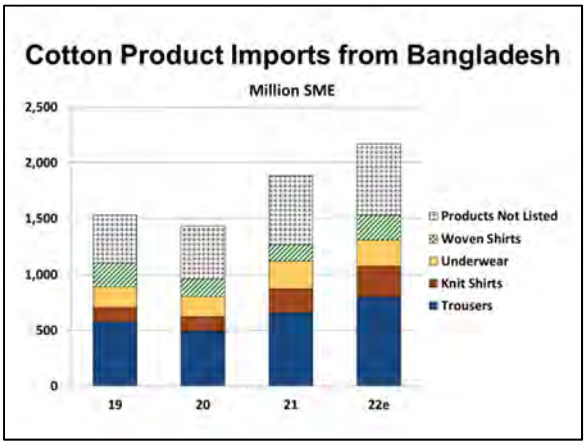


Figure 79 - Cotton Product Imports from Bangladesh

Vietnam

Vietnam continues to be a more significant supplier of cotton product imports (Figure 80). U.S. cotton product imports from Vietnam have increased by approximately 7,875% based on SME since 2001. In 2001, the U.S. imported 24.3 million SME of cotton goods from Vietnam. This number

increased to an estimated 1.9 billion SME in 2022. The largest category of imported cotton goods from Vietnam in 2022 was trousers. Based on SMEs, this category represented 24.7% of all cotton goods imported from Vietnam. The next largest category was underwear (16.6%), followed by knit shirts (15.2%) and nightwear (8.5%).

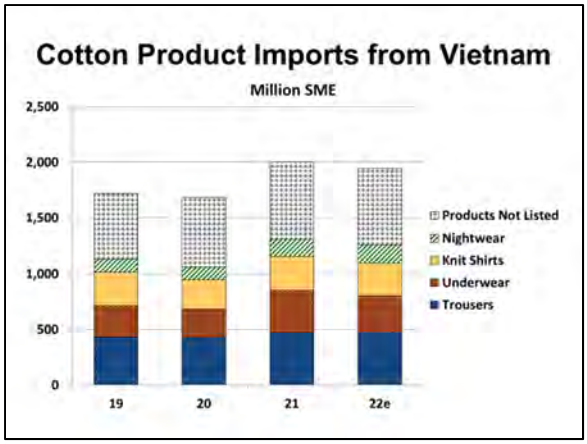


Figure 80 - Cotton Product Imports from Vietnam

South Korea

Based on SMEs, the largest category of cotton goods imported from South Korea in 2022 was combed cotton yarn, which accounted for 37.3% (Figure 81). The second largest category in 2022 was cotton sheeting fabric (16.5%), followed by cotton gloves and mittens (4.5%) and cotton hosiery (4.5%).

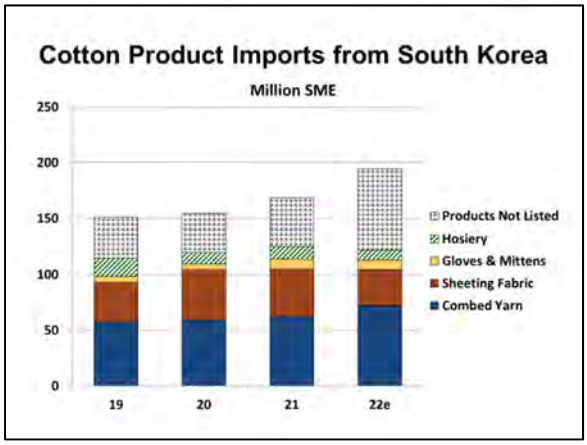


Figure 81 - Cotton Product Imports from South Korea

Turkey

Based on SMEs, the largest category of cotton goods imported from Turkey in 2022 was "other cotton manufactures", which accounted for 26.3% (Figure 82). The second largest category in 2022 was cotton trousers (10.3%), followed by cotton sheets (8.5%) and terry towels (8.2%).

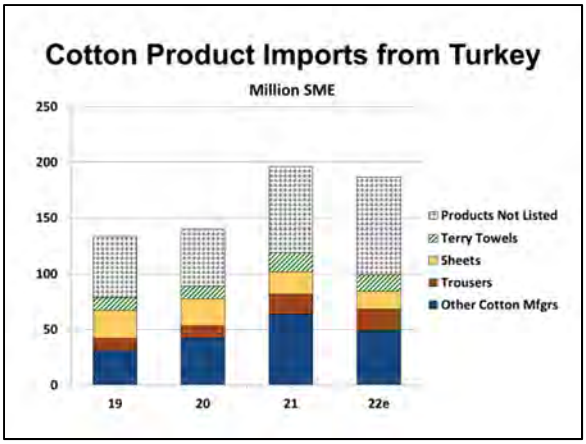


Figure 82 - Cotton Product Imports from Turkey

U.S. Cotton Product Exports

Exports of U.S. cotton textile and apparel products increased in 2022 (Figure 83) by 1.5% to an estimated 3.0 million bale equivalents. This increase was due to an increase in cotton apparel (Figure 84). Exports of cotton apparel increased by 28.3% to 384 thousand bale equivalents. Exports of cotton yarn, thread and fabric decreased by 0.7% in 2022 to 2.5 million bale equivalents. Exports of home furnishings (including floor coverings) decreased by 20.5% over the previous year to an estimated 78 thousand bale equivalents. For 2023, NCC projects U.S. cotton textile exports to increase 45 thousand bales to 3.1 million bale equivalents.

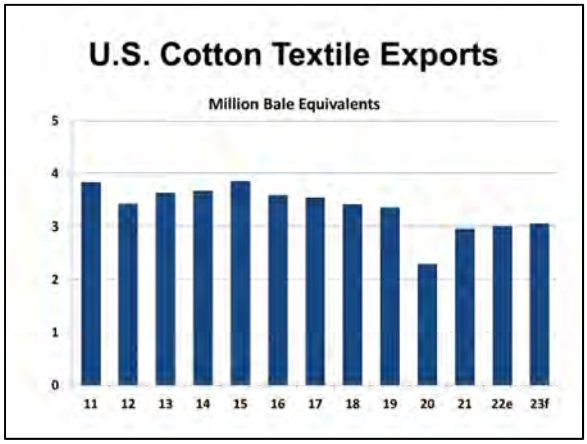


Figure 83 - U.S. Cotton Textile Exports

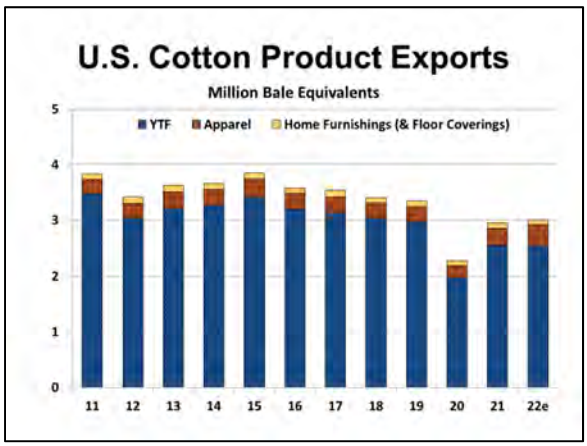


Figure 84- U.S. Cotton Product Exports

The top customers of exported U.S. cotton textiles and apparel in 2022 were once again the USMCA and CBI countries (Figure 85). Exports to the USMCA countries last year totaled an estimated 522 thousand bale equivalents, down 7.6% from the previous year.

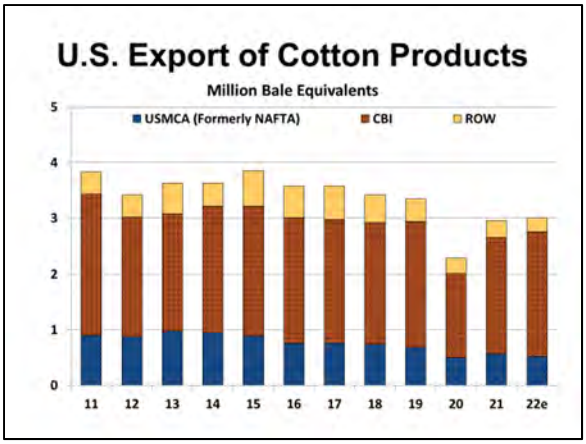


Figure 85 - U.S. Exports of Cotton Products

Exports to the region accounted for 17.4% of all U.S. cotton product exports. Exports to Mexico decreased to an estimated 326 thousand bale equivalents from 341 thousand in 2021. Cotton product exports to Canada decreased by an estimated 12.5% to 196 thousand bale equivalents for 2022.

U.S. exports to the CBI countries increased last year. In 2022, exports increased 7.3%, to 2.2 million bale equivalents or 74.9% of all U.S. cotton exports. Approximately 98.9% of the cotton products exported to CBI went to the CAFTA-DR countries.

World Market Situation

World cotton prices, as measured by Cotlook Ltd.'s "A" Index, ranged between $0.89 and $1.73 per pound during calendar year 2022 (Figure 86). For the current marketing year-to-date, the "A" Index has averaged $1.07 per pound, $0.24 lower than the previous marketing year average.

Figure 86 - "A" (FE) Index

World

World cotton production dropped slightly to an estimated 115.4 million bales in 2022 (Figure 87). China and India were the leading producers followed by the U.S., Brazil, and Australia. The U.S. crop of 14.7 million bales was 2.8 million bales lower than in 2021.

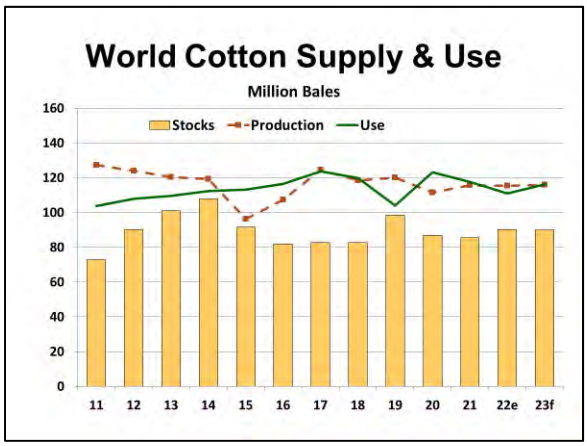


Figure 87 - World Cotton Supply & Use

World production exceeded consumption expectations in 2022. The latest world production estimate was 4.5 million bales higher than projected mill use of 110.9 million bales. Ending stocks were projected to increase 4.8 million bales to roughly 90.1 million bales in the 2022 marketing year, resulting in a stocks-to-use ratio of 81.3%.

For the 2023 marketing year, world harvested area is projected to grow by 2.2% to 80.6 million acres. World production is estimated to increase slightly in 2023 to 115.9 million bales. World consumption is projected to increase to 116.1 million bales in 2023. Ending stocks are projected to fall by 220 thousand bales in the 2023 marketing year to 89.9 million bales, resulting in a stocks-to-use ratio of 77.5%.

China

China remained one of the largest cotton producers in 2022 with a crop of 28.0 million bales, 1.2 million bales higher than the previous crop year (Figure 88). The Ministry of Agriculture and Rural Affairs (MARA) continues to promote cotton planting mainly in the northwest with Xinjiang's area, and in the Yangtze River and the Yellow River regions of China. In the 14th Five Year Development Plan for Crops Production (2021-2025) published in January 2022, MARA set a target for cotton planted area at 3.2 MHa (7.9 million acres) and production at 5.9 MMT (27.0 million bales) by 2025. The target for the Xinjiang province is roughly 2.4 MHa (5.9 million acres) and 0.8 MHa (2.0 million acres) for the Yangtze River and the Yellow River regions combined. Farmers in Xinjiang have benefitted from a target-price subsidy that was established in 2017, and the province exhibits a generally stable planted area and higher yield than China's other cotton production areas.

Cotton farmers outside of Xinjiang are at a relative disadvantage in terms of government subsidies, and cotton planting is marginalized in small plots. Yields are consistently lower and planted area continues to decline in these areas. Additionally, maintaining area continues to be a challenge due to increases in labor costs as almost 100.0% of the harvest is hand-picked. Cotton planting in these regions is also impacted as farmers have more crop choices including grains and oilseeds (both demanding less labor inputs) and more work opportunities available in cities within the Yangtze River and the Yellow River regions.

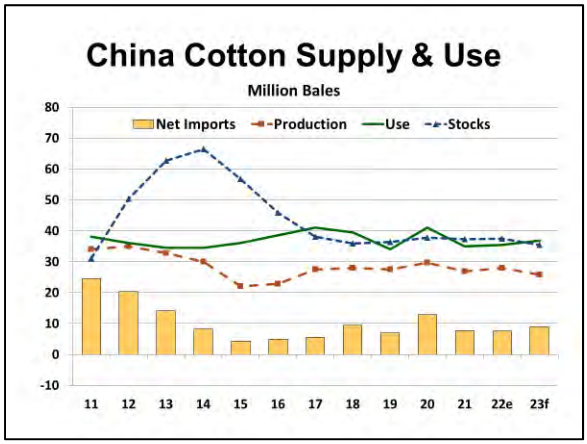


Figure 88 - China Cotton Supply & Use

In general, China's cotton production is challenged by increasingly high production costs, particularly in the Yellow River and the Yangtze River regions. High costs for labor and other inputs are likely to force farmers to gradually abandon cotton. In Xinjiang, limited water resources will constrain area expansion, and may lead to abandonment of cotton farming on marginal land. Nevertheless, cotton continues to be the most reliable income crop in Xinjiang.

Xinjiang's higher yields compared to the national average demonstrate the region's advantageous weather conditions, scale farming, and high rates of mechanized harvest. Although Xinjiang farms under the umbrella of the governmental Production and Construction Corporation (PCC) have a higher rate of mechanization than non-PCC farms, higher labor and other production costs have pushed the entire region to accelerate mechanization. According to the Xinjiang Agricultural and Rural Affairs Department, the overall machine harvested rate exceeded 80.0% of planted area in the region, with rates in northern Xinjiang reaching over 90.0%.

The Department has emphasized the importance of raising quality and taken steps to assist farmers in planting higher quality cotton varieties, reducing the number of planted cotton varieties to 45 in marketing year (MY) 21/22 from 64 planted varieties in the previous year. Xinjiang's yield may be affected by the subsidies, which have spurred expansion onto marginal, lower yielding lands. Cotton yield in all other production areas outside of Xinjiang remains low due to lack of scale, little government support, and limited use of technology.

For China, a 2023 crop of 25.8 million bales is projected, down from 28.0 million in 2022 due to lower area and lower yields. The latest China Cotton Association (CCA) acreage survey indicates a 1.5% decline in area for 2023.

The textile and apparel industry continues to be a driver of economic growth and employment, accounting for 10.5 million jobs or about 9.0% of total manufacturing employment according to 2018 National Bureau of Statistics **(**NBS) data. NBS data from 2020 shows China's trade surplus from textile and apparel reached U.S. $236 billion, about 56.0% of its total trade surplus. The Textile Industry Association estimates China's spinning capacity at 110 million spindles, accounting for over half of global capacity. NBS data indicates that fixed asset investment for textile and apparel

industries increased in 2021, up 11.9% and 4.1%, respectively, from the previous year. However, the 14th Five-Year Development Guidance for Cotton Textile Industry (2021-2025) notes plans to reduce total spindles to 100 million by 2025, while raising spinning use (and overall spindle utilization) of cotton fiber and non-cotton fiber to 7.0 MMT and 13.0 MMT by 2025, from the 6.0 MMT and 11.3 MMT, respectively, in 2020. Despite the growing population and consumer income, China's textile and apparel sector continues to be challenged by increasing production costs from raw materials and labor inputs in the long term.

With this in mind, a slight increase in China mill use is expected for the 2023 marketing year to an estimated 36.8 million bales. China was projected to consume 35.5 million bales in 2022. The gap between China's cotton consumption and production for the 2022 marketing year is 7.5 million bales. From 2015-2018, the gap was filled with reserve sales and a small level of imports. However, the projected growth is not without downside risks, including a continued slowdown in economic activity due to the ongoing impacts of the coronavirus and China's recently easing of their strict "zero-COVID" policies, on-going trade tensions and strong competition from competitively priced polyester.

For the past decade, China imported 80.0% of raw cotton from four countries - the U.S., Australia, Brazil, and India. Over the years, the market share for these countries has changed, particularly as China has imported less cotton from India and Australia and more from the U.S. and Brazil.

While Chinese end-users favor the quality and reliability of U.S. cotton, exports from Brazil, Australia, and India have become increasingly competitive during the past few years. Brazil's cotton industry is confident it will increase its production in the next few years and can address quality concerns raised by Chinese end-users. Recent trade issues between the United States and China allowed Brazil and other countries to gain market share. China's cotton and textile industries could be further impacted by the U.S. government's increased focus on addressing forced labor allegations in China's Xinjiang region, where most of the cotton is produced.

Competing countries are also benefiting from the on-going trade tensions between China and Australia that have largely locked Australia out of this market. In the 2019/20 marketing year, the Australian share of China's raw cotton imports was 13.0%. In 2020/21 and 2021/22, Australia's share was 3.0% and 2.0%, respectively.

Although the time period for the Phase I trade agreement between the U.S. and China has expired, China's current tariff exclusion process applicable to U.S cotton is assumed to continue throughout the timeframe of this economic outlook. For the 2022 marketing year, Chinese cotton imports are estimated to be 7.8 million bales. For the 2023 marketing year, cotton imports are estimated to reach 9.0 million bales.

Chinese stocks are projected to remain relatively unchanged for the 2022 marketing year at 37.4 million bales. For 2023, ending stocks fall to 35.4 million bales.

India

According to the latest estimates, India produced 26.5 million bales of cotton in the 2022 marketing year (Figure 89). If these estimates hold, the 2022 crop would be higher than the 2021 crop of 24.4 million bales by 2.1 million bales. For the past few years, India and China have been competing for the top spot in terms of cotton production. For the 2022 marketing year,

India's production was behind China by 1.5 million bales.

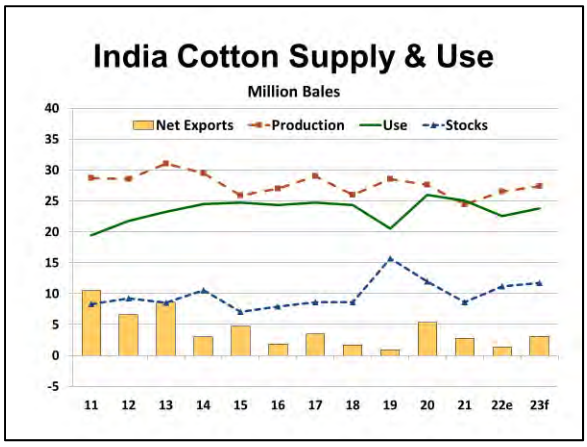


Figure 89 - India Cotton Supply & Use

India accounts for about one-third of global cotton area. Within India, the central cotton-growing zone produces two-thirds of the country's cotton output, which includes the states of Maharashtra, Madhya Pradesh, Gujarat, and Odisha, where much of the crop is rain fed.

The northern region, which consists of the states of Punjab, Haryana, and Rajasthan, produces cotton under irrigated conditions and accounts for about 12.0% of production. In the south, the states of Andhra Pradesh, Karnataka, and Tamil Nadu account for 25.0% of production.

The central and southern regions typically grow long duration cotton that allows farmers to reap multiple harvests. While the number of pickings have declined as traditional varieties are replaced by biotech hybrids, farmers can still manage up to five pickings per plant depending on weather conditions. In contrast, irrigated cotton in the northern region is mostly a short season crop that fits into a cotton-wheat cropping system.

Cotton, a predominantly monsoon-season or Kharif crop, is planted from the end of April through September and harvested in the fall and winter. According to the Ministry of Agriculture and Farmers Welfare (MOAFW), the share of area under cotton is 6.1% of the total crop area in India. Cotton yields have plateaued over the last five years with an average of just over 400 pounds per acre.

Area under BT (Bacillus thuringiensis) cotton and other improved varieties have reached an estimated 90.0% to 93.0%. Prospects for future improvement in yields are limited as most cotton is grown under rain fed conditions on small farms. The regulatory approval process of introducing new biotech traits is at a standstill, which has led to many companies scaling back, stopping, or withdrawing development of new biotech varieties for cotton and other crops, which will likely impact future long-term growth.

There are an estimated 6.0 million cotton farmers with the average farm size of 1.5 hectares (roughly four acres). Small land holdings limit the ability to adopt capital-intensive production technologies and infrastructure. Even without changing land holdings, yields would likely benefit from improved irrigation, fertilizer, micronutrients, pests, and disease management. Future growth in cotton production is more likely to come from higher yields rather than area expansion. According to the MOAFW, close to 33.0% of total cotton area is under irrigation.

In terms of marketing, the government of India establishes a minimum support price (MSP) for seed cotton. New MSP prices are announced annually and may or may not precede the start of the planting season. The Cotton Corporation of India (CCI) has been appointed as the main agency to manage price support operations in the event prices of Fair Average Quality (FAQ) grade seed cotton (kapas) fall below the MSP level. The CCI is responsible for price support

operations in all states. CCI, in addition to buying at MSP and marketing that cotton through an auction, is active in the market at other times, and buys or sells as conditions dictate. For MSP operations, CCI is assisted occasionally by other federal or state government marketing organizations (e.g., the Maharashtra State Co-op Cotton Growers Marketing Federation or MAHACOT) to purchase cotton in support of local producers. State officials in Gujarat have also previously added a premium in addition to the MSP to support local producers.

For 2023, India's harvested area is projected to increase by 2.0% in response to higher cotton prices. Production is projected to grow to 27.4 million bales in 2023.

Mill consumption was expected to fall in 2022 to an estimated 22.5 million bales, 2.5 million bales lower than the 2021 marketing year. Rising domestic and global fiber prices continue to remain a challenge, as they increase production costs for processors, driving cotton yarn prices to higher levels. Inflation expectations in major cotton-based textile consumer markets is also a factor to consider, which will dampen retail demand in the short to medium term.

The gradual rise in consumer demand for organic-based apparel is driving manufactures to incorporate organic cotton supplies into their production lines. The United States and Europe are the major markets for organic apparel for Indian textile manufacturers. Organic supplies command a higher price in the market in comparison to non-organic suppliers. The government of India is promoting organic farming in a cluster approach to bring down its costs which is expected to increase returns for farmers through Paramparagat Krishi Vikas Yojana (PKVY).

Most organic cotton production is concentrated in the states of Madhya Pradesh, Maharashtra, and Odisha. While most countries have developed their own organic standards, Indian mills continue to follow widely accepted, globally recognized standards - Global Organic Textile Standard (GOTS). However, there are concerns. According to trade sources, increasing lapses in the chain of custody, and rising cases of false organic certification are hindering the growth of the sector.

While cotton comprises the largest share (70.0%) of fiber in textile mill consumption compared to man-made fiber (30.0%), volatile cotton prices, weak demand, and cheaper man-made fibers are pushing consumption towards more blends and the use of cotton waste (which includes low fiber content cotton, cotton droppings, gin motes, comber noil which are all by-products of ginning and yarn processing which offer a cheaper alternative). The manmade fiber industry is viewed as an avenue for growth for the next decade due to the availability of fiber, and capability to treat manmade fiber. Unlike the cotton sector, the manmade fiber sector is a more organized, fully integrated industry.

India is the second largest producer of polyester and the largest producer of viscose globally. The volatility in cotton fiber prices is pushing the industry to consider diversification in manmade fibers for their long-term fiber requirements. The government of India introduced the PLI Scheme for textiles in 2021 to expand manmade fiber and technical textiles segments of the textiles value chain. Despite the continued pressure from manmade fibers, growth in mill use is expected for the 2023 marketing year. With continued government support and ample supplies of cotton, India's mill use should increase to 23.8 million bales in the 2023 marketing year.

In 2023, India's net exports are expected to climb to 3.1 million bales. India's stocks are projected to increase to 11.8 million bales in the 2023 marketing year.

Uzbekistan

Current estimates put Uzbekistan cotton production at 2.7 million bales for 2022 (Figure 90).

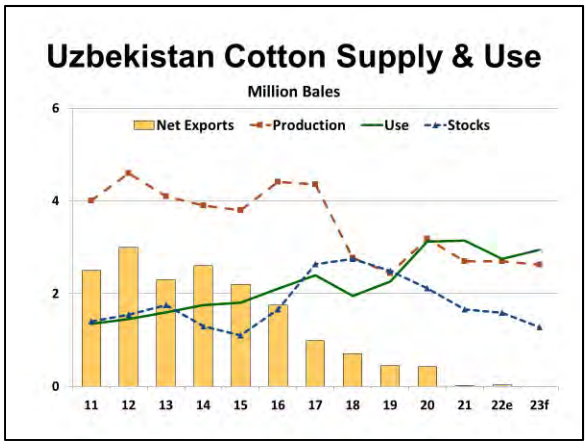


Figure 90 - Uzbekistan Cotton Supply & Use

The government of Uzbekistan continues to play a major role in cotton production. A major development for the cotton industry in Uzbekistan came in March 2020 when Uzbekistan liberalized the cotton market with a presidential decree. The intention of the government is to reduce planting in areas where field yields are lower than the country average, such as in highly salinized areas and mountain regions, and to facilitate production of other crops instead, primarily fruits, vegetables and viticulture. The presidential decree published in October 2019 establishing a state strategy called "Strategy for Development of Agriculture of the Republic of Uzbekistan for 2020 – 2030" supports increasing horticulture and viticulture for domestic use and exports as well.

As part of the transformation of the agriculture sector, reforms are being introduced to gradually move away from the historical focus on the production of cotton and wheat to encourage the production of other agriculture products in which Uzbekistan has a relative comparative advantage, such as in the production of certain high value horticulture products. Liberalization of cotton production and sales fits into these reforms.

Despite the overall decrease in planting area over time resulting from these policies, the government expects that the total lint cotton production will remain at optimum levels to meet the demand for the growing domestic textile industry in the coming years. Clusters can also trade and export cotton as needed.

For the 2023 marketing year, Uzbekistan cotton production is projected to decrease slightly to 2.6 million bales.

The most important trend in the cotton sector in Uzbekistan is the effort to consume all cotton produced in the country and not export it as raw material.

Despite challenges such as the armed conflict and macro-economic difficulties effecting the region, investments in the textile industry in Uzbekistan continue. These large investments in the yarn and fabric industry, be it domestic or foreign direct investments, hint that the consumption of cotton in Uzbekistan will continue to increase in the medium-term. However, with a European recession emerging due to fallout from the Russia-Ukraine war, the ready-to-wear apparel demand from consumers in the west is contracting, as orders for spring clothing dropped sharply. In the next several years, Uzbekistan may start to import cotton as the investments in yarn, fabric and ready-to-wear-garment industry continue.

As a result of the ongoing expansion and investment, Uzbekistan domestic cotton consumption was estimated at 2.8 million bales in the 2022 marketing year. For 2023,

Uzbekistan's mill use is projected to increase to 3.0 million bales.

The most important policy update regarding cotton in Uzbekistan in 2022 was that the longstanding forced labor issue was adequately solved in the perception of international NGOs. On March 01, 2022, the International Labor Organization (ILO) declared that "Uzbek cotton is free from systemic child labor and forced labor." Many fashion and ready-to-wear-apparel brands had refused to purchase apparel and garments produced from fabrics or yarn made from Uzbek cotton due to the child labor and forced labor issues.

As of 2021, there were 331 brands that pledged not to buy apparel produced from Uzbek cotton, including many U.S. brands. On March 10, 2022, the coalition of companies called Cotton Campaign ended its call for a boycott for Uzbek cotton.

This news was very much welcomed by the government and cotton, textile, and garment and apparel production industries and markets in Uzbekistan and has the potential to increase yarn and fabric exports of Uzbekistan to an extent. However, as most of Uzbekistan's cotton products are currently exported, the room for increase is limited. In the medium-to-long run, purchases from ready-to-wear-apparel producers of Uzbekistan might increase, especially in western markets like the EU, UK, and U.S., with current restrictions on cotton products made with forced labor. Turkish textile and ready-to-wear-apparel companies might increase investments in Uzbekistan for sourcing to western brands. These positive developments could lead to the opening of production facilities of some international brands in Uzbekistan; however, the perceived investment risk in the country is still quite high for western brands.

Pakistan

Cotton is an important cash crop and lifeline of Pakistan's textile industry. The cotton crop is planted on 14.0% of arable land during the "Kharif" or monsoon season from April to June. Production is concentrated in two provinces with Punjab accounting for nearly 65.0% and Sindh nearly 35.0% of planting area. Over 90.0% of cotton is produced by small farmers cultivating less than five hectares of land. An estimated 1.5 million farmers grow cotton.

Pakistan mainly produces short and medium staple cotton. Lint quality continues to be an issue within the industry based on the quality of the picking and ginning that result in varying bale sizes and high levels of foreign matter. Additionally, farmers often plant multiple varieties as a hedge against poor germination rates. Hence, identifying specific grades or properties from a particular variety is not done.

A core group of cotton farmers are expected to grow cotton and will be utilizing their experiences to enhance productivity. Borderline farmers will shift to other more profitable crops like sugarcane, rice, and corn, because of better prices and government support. Sugarcane farmers receive a support price which guarantees them a fixed price with the mills; rice is Pakistan's major export commodity that fetches a good price in the international and local markets; and corn being a major ingredient for poultry feed, also commands a good price in the domestic market. These alternate crops provide give good returns to farmers and are also less prone to insect attack and diseases as compared to cotton. In contrast, cotton growers do not receive a support price and prices in the local market are affected by a variety of factors like the size of the crop, prices in the international market, government and industry policy, and

the demand for cotton and textile products in the domestic and international market.

Going into the 2022 crop, water reserves for irrigation were adequate and the government continued to provide support to farmers for inputs; however, no significant yield increase was projected. There are several factors that affect yields including the following:1) Climate Change: Pakistan is among those countries most vulnerable to the effects of climate change. Changing weather conditions, such as unexpected rainfall and temperature changes at critical stages of crop growth can spur pest attack that exact a heavy toll on crop productivity; 2) Germplasm: The narrow genetic base of cotton germplasm is prone to insect and diseases and is one of the major factors influencing crop productivity in the country; 3) Biotechnology: Pakistan relies on a back-crossed 18-year-old biotechnology event, one that is less effective against bollworms and diseases. This event was obtained illicitly, calling into question Pakistan's ability to safeguard against and enforce intellectual property (IP) infringements. The current reluctance of technology providers to invest in Pakistan is related to these IP concerns and remains an obstacle for the country's cotton farmers in accessing the latest generations of GE cottonseed.; 4) Pest Infestations: Sucking insects, such as white fly, continue to spread cotton leaf curl virus (CLCV), a disease which drastically reduces yields; and chewing insects, such as pink bollworm, which impairs cotton quality, lowers yield, and requires extra effort on the part of farmers to manage pest levels; 5) Locusts: The most recent cyclical emergence of locusts as a threat to all vegetation started in 2019 and continues to be a threat in the cotton producing areas bordering Cholistan in Sindh and Thar in Punjab; and 6) Cottonseed Quality: This is a perpetual issue with low germination rates and weak certification.

After several months of deliberations and extensive dialogue with the influential textile industry, on February 16, 2022, the Cabinet approved the third "Textile and Apparel" policy, which preserved existing tax rebates, energy subsidies, and credit programs through 2025. Due to Pakistan's need to cut government spending and increase revenues, previous internal drafts of the policy had removed many of the tax provisions and energy subsidies. However, reflecting the importance of the sector to Pakistan's economy and due to pressure from the textile sector's leadership, the government ultimately opted to retain existing tax provisions and to provide "regionally competitive energy rates" through 2025. The government hopes this policy will lead to continued strong growth in value-added textile exports.

Increasing cotton productivity is also a long-standing government priority, and the local textile producer's association persistently advocates for increasing domestic cotton production. Continuing a long history of initiatives to boost cotton production, following an inter-ministerial meeting on February 7, 2022, the Prime Minister announced plans to form a "Cotton Authority," focused on developing and distributing higher yielding cotton seed. However, the lack of a functioning biotechnology regulatory regime, combined with the inability of life science companies to enforce technology use and/or stewardship agreements, continues to hinder development of cotton seed technology using the latest bioengineered traits. In addition to support for seeds, existing programs provide subsidized fertilizer and loans for implements.

In 2022, cotton production was estimated at 3.7 million bales, 2.3 million bales lower than in 2021 and the lowest level since 1983. In 2022, severe flooding resulted in abandoned fields and the lowest level of

harvested acreage since 1970. An increase in production is expected for the upcoming marketing year based on the projection of increased yields. Assuming normal weather conditions and lower pest infestation, production is projected to increase to 4.6 million bales in 2023 (Figure 91). Over the past four years, Pakistan's production has continued to trend downward. From 2019-2022, Pakistan's average production was 5.1 million bales. From 2008-2018, average production was 8.8 million bales. With a strong textile sector, Pakistan has increased their reliance on imported cotton as their domestic production has declined.

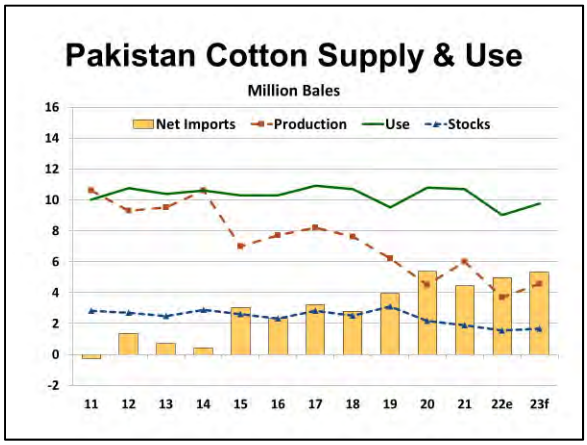


Figure 91 - Pakistan Cotton Supply & Use

Consumption is expected to increase to 9.8 million bales in 2023, up 750 thousand bales from 2022. Cotton continues to face competition from man-made fibers and other manufacturers in Asia. Still, textiles continue to play an important role in Pakistan's economy. The textile sector is the largest industrial sector in Pakistan and accounts for about 40.0% of the industrial labor force and employing 10.0 million people. Increased foreign investment in Pakistan's energy and infrastructure sectors could help spur the future growth of Pakistan's textile sector.

Pakistan continues to be a net importer of cotton, primarily because of strong demand for better grades of cotton for blending and producing export-oriented quality textile products. Typical imports include upland and long staple cotton, as well as medium staple cotton, to augment domestic supplies for processing and re-export. Major suppliers of imported cotton are the United States, Brazil, Mexico, Argentina, Egypt, and West African countries; suppliers of manmade fibers are China and Europe. Cotton import demand continues to be driven by exports of cotton yarn, fabric, and other value-added cotton textile products.

For the 2022 marketing year, Pakistan is expected to import 5.0 million bales, with current U.S. sales commitments of 1.9 million bales. However, as of early February, Pakistan has very low foreign currency reserves and the ability to purchase imported products, including cotton, is limited. The International Monetary Fund (IMF) is currently considering a bailout fund but they want the Pakistan government to implement fiscal reforms before releasing any of the funds. Based on the current situation, Pakistan's ability to fulfill current export sales commitments is unclear. As of January 26, 2023, 1.2 million bales of U.S. cotton had been sold to Pakistan but not shipped.

For the 2023 marketing year, assuming that Pakistan's foreign currency issues are resolved, Pakistan is expected to increase net cotton imports to 5.3 million bales.

Turkey

Production climbed to 4.9 million bales in 2022 (Figure 92). For 2023, production is projected to fall to an estimated 4.0 million bales due to reduced acreage based on higher prices of competing commodities.

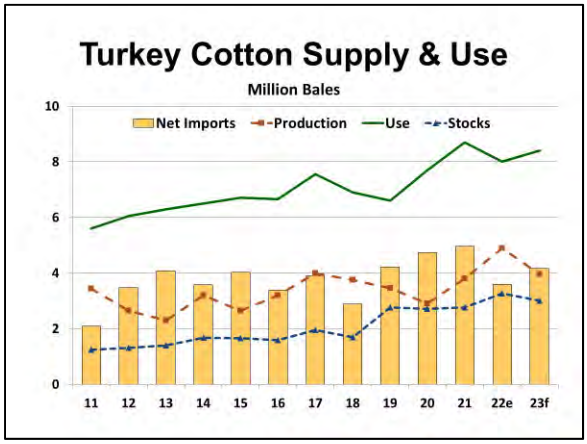


Figure 92 - Turkey Cotton Supply & Use

There are three major production regions in Turkey for cotton. The first one is the Aegean region by the Aegean Sea in the western part of the country, mostly around Aydin and Izmir provinces. The second is the Cukurova region, which is in the southern part of the Adana province, in the Eastern Mediterranean area. Cukurova has traditionally been a cotton production area for Turkey, but in the last decade many cotton fields have been replaced by citrus orchards because citrus is easier to export. In addition to increasing the citrus area, farmers have been planting alternative crops such as wheat, maize, and soybeans.

The third and largest area of production for cotton is in the southeast of Turkey where the Southeast Anatolia Project (GAP) has been underway since the late 1980s. GAP is a major hydroelectric and irrigation project for the plains of Southeast Turkey supported by the government of Turkey (GoT). In addition to these three major planting regions, there is a small amount of cotton production around Antalya. Most of Turkey's cotton is planted between mid-March and mid-May and harvested from mid-August through November.

Aegean cotton is considered the best quality and is preferred by textile producers. Aegean cotton is longer staple (1 5/32") than cotton from Cukurova (1 3/32") or the GAP (1 1/8") region, although the quality of the cotton has improved significantly in the GAP region due to improved seed quality.

The textile industry continues to be one of the most important sectors for the Turkish economy. According to the Turkish Exporter's Assembly data, in calendar year 2021, exports of ready-to-wear items reached $20.25 billion, up 18.0% year-over year. Exports of textile and raw materials climbed to $10.15 billion, an increase of 39.0% compared to a year ago. This was a record high export figure for Turkey in the textile/garment/apparel industry. Overall, the share of textiles and products of Turkey's total exports was about 15.0% in 2020, making it one of the top export industries of the country. Turkish textile exporters have the advantage of faster order response times and higher quality compared to many of their competitors.

Turkey's yarn production capacity is estimated at 8.0 to 8.5 million spindles and 800,000 to 900,000 rotors. Turkey ranks among the top five countries in the world in terms of yarn production capacity and number six in ready-to-wear-items production. Over the years, Turkish mills have invested in new machinery and technology to increase quality and lower costs to stay ahead in the very competitive international textile trade. These investments signal a long-term, positive trend for cotton consumption in Turkey.

For 2022, Turkey's mill use was expected to be lower than 2021 while net imports fell to an estimated 3.6 million bales. For 2023, Turkey's mill use is projected to increase slightly to 8.4 million bales. Turkey is projected to have net imports of 4.2 million bales in 2023, up from the 2022 marketing year estimate of 3.6 million.

Australia

The latest estimate for Australia's 2022 cotton production was 5.0 million bales (Figure 93). A multi-year drought in key cotton areas had sharply reduced irrigation water availability; however, a return to more normal weather patterns provides much improved prospects for some expansion in planted area. In fact, cotton production in Australia is primed to possibly set new records in terms of production. This is due to the strong prospect of increased irrigation water availability at the start of planting.

The irrigated cotton production regions, particularly in New South Wales, have had an extraordinarily high spring/summer rainfall period that has resulted in a highly unusual situation of irrigation water storage dam levels being higher near the end of the summer crop irrigation period than at the start of cotton planting, and those dams are at or near capacity.

Australia is a major producer and exporter of cotton, typically representing 10.0% to 13.0% of world exports. There are up to 1,500 cotton farmers in Australia of which 90.0% are family farms, producing 80.0% of the total crop. Cotton in Australia is primarily grown in the states of New South Wales and Queensland. In a typical year New South Wales produces around two-thirds of the national production and one-third in Queensland. The main growing areas in Queensland are in the central and southern parts of the state. Within New South Wales, the majority of the cotton is grown in north and central areas although the southern areas are increasing in importance.

With improvements in cotton varieties suitable for differing growing conditions there has been some expansion of cotton areas in southern New South Wales and northern Victoria. Cotton growing is also in its early stages of development in far north Queensland, Northern Territory and also in Western Australia in the Ord River Irrigation Scheme. These areas offer substantial scope for expansion if they are determined to be suitable for growing cotton. Thus far, growers have transported their cotton to southern Queensland for ginning, some 3,400 kilometers (2,070 miles) from the Western Australian production area. An existing grower-owned ginning organization is in the process of building a new facility in the Northern Territory near Katherine. There are also feasibility studies being carried out for a potential additional site in Kununurra in Western Australia to service the cotton growing potential in the Ord River Irrigation Scheme area and nearby areas. Cotton plantings are increasing and the establishment of a new cotton gin and perhaps a second in the near term could trigger significant growth in cotton production in this region.

Cotton is a summer crop and in the major growing regions in Australia soil preparation typically occurs between July and September in readiness for planting in October/November and as late as December. Picking typically occurs from March to June. The further north the growing area (such as central Queensland), the earlier the season can start with a wider growing window due to the warmer climate. In these regions picking can be as early as January and finish as late as July. In the far northern regions of Queensland, Northern Territory, and Western Australia, where the industry is in its infancy, planting is typically in November/December, prior to the onset of the tropical wet season. In these regions harvesting is typically in June/July. Growers in these regions are yet to invest in cotton picking equipment at this point and rely on contractors to travel from the southern regions after their season is completed.

In a typical season, approximately 90.0% of cotton production is irrigated, and 10.0% is dryland. However, cotton classified as having been produced by irrigation includes crops that may have received only one irrigation for the season. Over the last two decades, the Australian cotton industry has improved water efficiency with the advancement of cotton varieties, irrigation techniques, soil moisture monitoring and whole farm irrigation planning to recycle runoff water.

The dependence on irrigation water is lower towards central Queensland due to the northern-most areas being subject to tropical wet season rainfall primarily between January and March (typically in the mid to late growing period). These regions have a greater proportion of their water requirements met by in-crop rainfall than regions further south, particularly in New South Wales. Similarly, in Far North Queensland, Northern Territory, and the adjacent Ord river region in Western Australia production is mainly based around in crop rainfall. However, there is opportunity for some irrigated cotton crops, particularly in the Ord river area. The major growing regions in New South Wales are highly dependent upon irrigation water availability.
Assuming a return to more normal weather patterns, Australia's acreage is projected to increase slightly in 2023 resulting in a slight increase in production which is estimated at 5.1 million bales. However, Australian cotton production is extremely volatile from year to year as it is primarily driven by irrigation water availability.

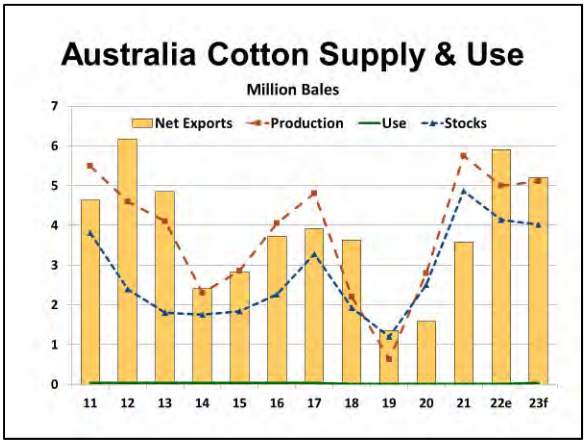


Figure 93- Australia Cotton Supply & Use

Domestic cotton processing volumes are extremely low in Australia. Manufacturing in Australia is uncompetitive due to the high cost of labor relative to the major cotton processing countries such as China, Vietnam, Indonesia, Bangladesh, and India. There is no anticipated change to this situation and domestic consumption is forecast to remain at very low levels.

Previously, China was the major destination for Australian cotton exports, with Vietnam, Indonesia and Bangladesh also being important destinations. However, recent trade tensions between China and Australia have had a dramatic impact on the volume of cotton trade between these nations. Vietnam and Indonesia have emerged as major export destinations, and increased trade to Turkey, Thailand and to a lesser extent Bangladesh have emerged. This has clearly highlighted that Australia has strong trade relations with numerous nations and is not highly dependent on trade with China.

Australia in typical years is the third or fourth largest exporter of cotton behind the United States, Brazil, and India. For the 2022 marketing year, net exports were estimated to climb to 5.9 million bales. With production of 5.1 million bales during the 2023 marketing year, net exports are expected to fall 5.2 million bales.

Brazil

In this environment of high production costs, it is important to note that most growers in Brazil have the option to plant alternative crops. In the Center West of the country, where the key cotton-producing state of Mato Grosso is located, many farmers plant two crops per year, with soybeans sown in September/ October, followed by a second, or safrinha crop of cotton or corn in January. In the northeast state of Bahia, growers typically plant just one crop - cotton or soybeans. Both soybean and corn prices have been hitting record highs and are projected to remain elevated. With a smaller upfront investment and currently high profit margins for soybeans and grains, some anticipate that some growers will favor those commodities at the expense of cotton.

Brazil is one of the global leaders in the planting of Genetically Engineered (GE) crops. Adoption for cotton stands at nearly 90.0%. According to Brazilian government data, the average yields for crops increased 70.0% during the past 15 years, with continued use of GE seeds being a major contributor to this growth. Industry sources in Mato Grosso and Bahia indicate that new GE drought and pest-resistant seed varieties have significantly improved yields, particularly in problematic seasons with less than favorable weather.

Brazil was projected to have an estimated production of 13.3 million bales for the 2022 marketing year (Figure 94). Cotton acreage was an estimated 4.0 million harvested acres while yields were up to an estimated 1,585 pounds per acre in 2022.

Production for the 2023 marketing year is projected at 13.5 million bales.

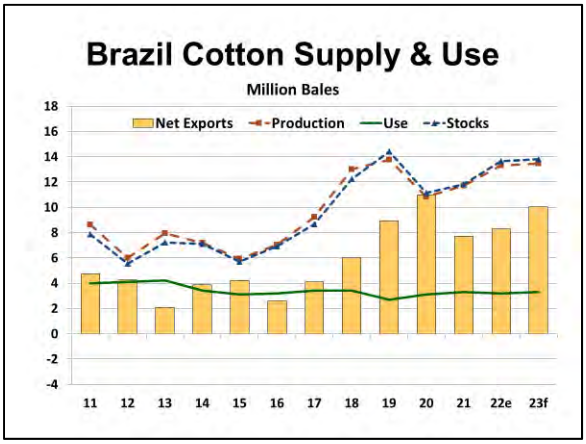


Figure 94 - Brazil Cotton Supply & Use

The first wave of impacts from the war in Ukraine reached the Brazilian economy with the rise in oil prices. The increase in fuel prices caused panic in the market, leading to projections for high inflation. With gasoline and diesel more expensive, other products are likely to be impacted, including those in the textile sector. The textile industry will also face possible price increases for raw materials in the upcoming years.

Brazilian mill use for the 2022 marketing year dropped to an estimated 3.2 million bales when compared to the previous year. Brazilian cotton consumption is expected to increase slightly in the 2023 marketing year with mill use estimated at 3.3 million bales.

In terms of trade, Brazil was expected to reach net exports of 8.3 million bales of cotton in the 2022 marketing year, which would be 20.0% of world exports. For the 2023 marketing year, net exports are expected to climb to roughly 10.0 million bales, increasing Brazil's world export share to 23.0%. Currently, 95.0% of Brazil's cotton exports are shipped via the port of Santos, in Sao Paulo state. It would be more cost-effective to ship cotton produced in the northern part of the country from ports in the North and Northeast, the so-called Northern Arc (Arco Norte). However, these ports are not currently equipped to handle container ships. With ongoing investments in

infrastructure, Brazil is expected to remain a formidable competitor in world cotton trade.

West Africa

In the West African cotton-producing countries, cotton production continues to play an important role in the economy. For all West African countries, the cotton planting season generally begins in June, with harvest starting in September/October and ending in November. Ginning mills collect cotton from October/November to March. Spurred by improved yields, cotton production in 2022 was estimated 5.4 million bales.

Cotton producers in the region include Burkina Faso, Mali, Cote d'Ivoire, Chad, and Senegal. Despite the obstacles facing cotton producers in this region, cotton remains an important cash crop in most of Francophone West Africa, Cote d'Ivoire, and Senegal.

The current projections have West Africa producing 6.0 million bales in 2023 (Figure 95). West Africa continues to measurably affect the cotton export market, since virtually all of its production is sold abroad. The region exports between 95.0% and 98.0% of its cotton production. For the 2022 marketing year, net exports of 5.2 million bales were projected. For 2023, West African net exports are expected to grow slightly to 5.4 million bales.

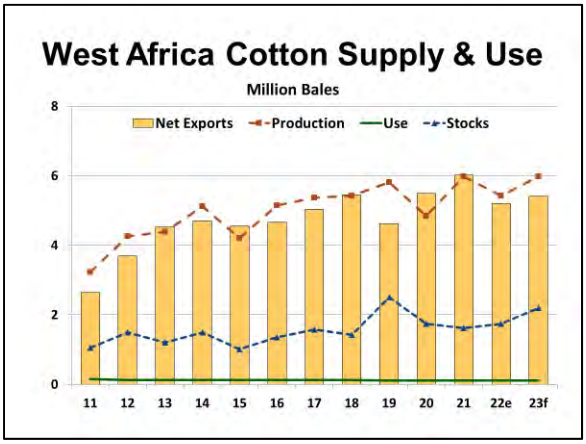
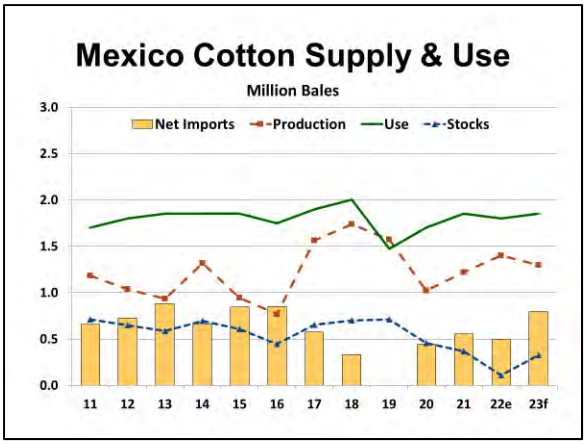


Figure 95 - West Africa Cotton Supply & Use

Longer term, West Africa's potential for growth and stability depends on whether or not they can address a number of internal issues related to their production, ginning, price discovery, and distribution systems. In addition, current political unrest in West Africa is limiting their presence in the world market.

Mexico

Mexican cotton production for marketing year 2022 reached an estimated 1.4 million bales. Production is expected to decline slightly in 2023 to 1.3 million bales due to lower acreage as growers switch to higher priced competing commodities (Figure 96).



In terms of consumption, Mexico is expected to increase consumption in 2023. Marketing year 2022 mill use was estimated at 1.8 million bales. For the 2023 marketing

year, Mexican mill consumption is projected to increase to 1.9 million bales.

Mexico is a major textile producer, with an industry based on competitive labor costs and deep integration with the United States. Mexico's textile industry has rapidly recovered from initial COVID-19 effects and the global slowdown for cotton products during the first half of 2020. Beginning in July 2020, the Mexican textile sector began diversifying their product offerings, adapting to new demand for household products like sheets and towels.

Additionally, production of personal protective equipment allowed many textile mills to remain operational and profitable. Many mills have continued to produce these products in addition to returning to their normal offerings. The recovery of global demand for garments, innovation in product offerings, and certainty and logistical transport advantage of textile trade through the USMCA agreement is accelerating cotton consumption. Additionally, high global freight costs have disincentivized the importation of garments from Asia and further boosted domestic textile production.

Mexico is a significant supplier of jeans and t-shirts to the United States (made in Mexico with U.S. cotton). Mexico's textile industry prefers to spin high quality and consistently supplied U.S. cotton. Cotton from the United States is expected to fulfill 60.0% of the textile industries need. Mexico's textile industry consumes domestic and U.S.-made yarns, cotton, and fabrics for apparel, home furnishings, or other industrial textiles for sale mainly in the United States

High international freight costs have also had an impact on the Mexican textile industry. With increasing international freight costs, Mexico's logistical advantage is the proximity. The U.S. industry is buying more textiles (technical textiles, yarns, nonwoven, carpets, fabrics, etc.) and apparel (trousers, surgical drapes, T-shirt, curtains and bed valances, track suits, surgical clothing, and others) from Mexico, due to logistical advantages and lower costs of delivery. Some U.S. and global brands are investing in textile plants and financing existing ones in Mexico to manufacture and export textiles and apparels to the United States.

Ongoing trade issues are another factor impacting the Mexican textile industry. The U.S. ban on cotton and cotton products from Xinjiang, China has created additional opportunities for Mexico to increase textile offerings to both the United States and Canada under the U.S.-Mexico-Canada Agreement (USMCA) rules of origin provisions. Because of USMCA certainty, a significant portion of Mexico's exported apparel consists of North American-made yarn and textiles. Due to transport and duty savings, nearshore options are cheaper than production in China or other Asian countries.

Mexico's textile industry prefers to use U.S. cotton over domestically produced supplies for several reasons: 1) If the product is for re-export for compliance with origin content, 2) High quality U.S. cotton is needed for the state-of-the-art machinery found in many of Mexico's textile mills, domestic cotton does not have quality consistency, 3) With U.S. cotton, yearly or twice a year contracts are made with textile companies to provide monthly deliveries which saves the buyer warehouse, insurance, and financial expenses. Mexican producers must often sell their complete harvest because of a lack of storage facilities, and 4) U.S. cotton programs assure sustainable production and traceability throughout the value chain.

Net imports were estimated to reach 500 thousand bales during the 2022 marketing

year. Mexico's net imports are expected to climb to roughly 792 thousand bales for the 2023 marketing year.

Indonesia

Indonesian cotton production was estimated to be 2 thousand bales for the 2022 marketing year (Figure 97). Current projections show this number unchanged in 2023.

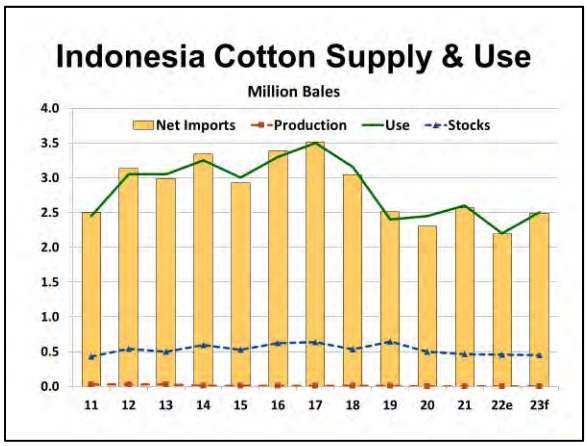


Figure 97 - Indonesia Cotton Supply & Use

U.S. cotton maintains a strong reputation among Indonesian spinners compared to cotton from other origins. Recent challenges come from demands from cotton end users such as international brands and their associated garment and fabric manufacturers and merchants requiring that the cotton meet sustainability initiatives, similar to the Better Cotton Initiative (BCI), which have gained prominence in other countries.

For 2022, Indonesia is expected to consume 2.2 million bales. Indonesian cotton consumption in marketing year 2023 is estimated at 2.5 million bales, while net imports are also expected to reach 2.5 million bales.

Vietnam

For the 2022 marketing year, Vietnam's cotton production was estimated to be 3 thousand bales with production estimates remaining unchanged for the 2023 crop at 3 thousand bales (Figure 98).

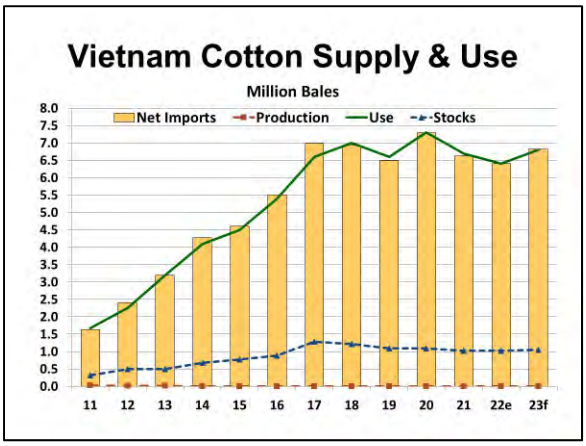


Figure 98 - Vietnam Cotton Supply & Use

In 2020, Vietnam's textile and garment industry experienced its first negative growth in its 25-year history with total exports dropping nearly 10.0% from the previous year to $35 billion, according to the Vietnam Textile and Apparel Association (VITAS). The COVID-19 pandemic severely disrupted Vietnam's textile and garment industry, causing disruptions in production, exports, and logistics management.

Vietnam textile and apparel exports reached approximately $39 billion in marketing year 2021, up 15.0% over 2020, according to Vietnam Customs trade data. Vietnam's textile industry stakeholders considered this result a success, given the constraints and challenges of COVID-19's negative effects on domestic production and global trade. Rising demand for apparel in Vietnam's largest export markets, including the United States and the European Union (EU), and for cotton yarn from China, in combination with a recovery in production as a result of the Vietnam's rapid and high vaccination rate were key to getting the country's textile and apparel exports back on track.

The global market recovery, benefits from free trade agreements, and strong

vaccination rates are supporting Vietnam's textile and apparel production and exports. However, challenges such as escalating freight costs and market uncertainty caused by the Russia-Ukraine war may limit the growth of Vietnam's textile and apparel industry. At the start of 2022, industry stakeholders set an ambitious export goal of $43 billion for the year, an increase of 10.0% over 2021, noting that this target is subject to change.

Gains in yarn exports greatly contributed to growth throughout the entire industry. Cotton-yarn spinning mills successfully maintained operations during COVID-19, with no shutdowns. Some spinning mills were even able to expand capacity in marketing year 2021, adding at least two hundred thousand spindles to the industry. There are approximately 110 cotton-yarn spinning mills operational in Vietnam, with 50.0% located in the South, 40.0% in the North, and 10.0% in the country's central region. China remains the largest market for Vietnam cotton yarn, accounting for roughly 83.0% of Vietnam's total cotton yarn exports. China-invested spinning mills in Vietnam, such as Texhong and Brotex, shipped a significant amount of this volume. South Korea is the second largest market. However, Vietnam exports of yarn to Turkey have dropped steadily since the Turkish government initiated an anti-dumping investigation on Vietnam yarn in 2016, with trade plummeting from 37 TMT in marketing year 2017 to an insignificant amount in marketing year 2021.

Global demand for garment products remains uncertain due to global economic concerns. Vietnam's textile and garment producers continue to closely watch developments in China, EU, and the United States to adapt their business plans to changing conditions.

Estimates placed 2022 marketing year mill use at 6.4 million bales. For the 2023 marketing year, consumption is expected to grow to 6.8 million bales.

Strong China demand for cotton yarn and Vietnam's spinning expansion continues to drive Vietnam demand for imported cotton; therefore, Vietnam will remain a significant net importer for the foreseeable future. The United States has long topped the list of cotton suppliers to Vietnam. The top five cotton suppliers to Vietnam in marketing year 2021 were the United States, Brazil, India, Australia, and Cote d'Ivoire, supplying 86.0% of the cotton for the country's production. For the 2022 marketing year, Vietnam's net imports were estimated to be 6.4 million bales and estimates are higher for the 2023 marketing year at 6.8 million bales.

Bangladesh

Marketing year 2022 cotton production in Bangladesh totaled 155 thousand bales (Figure 99). Domestically produced cotton accounts for less than 2.0% of total cotton consumption. Total cotton cultivation in Bangladesh covers only 0.6% of the country's 8.1 million hectares of arable land. Bandarban, Jhenaidah, Jeshore, and Rangamati are the major cotton producing areas of the country. Bangladesh produces numerous varieties of cotton, including Gossypium hirsutum, Gossypium arboretum, Gossypium herbaceum, and Gossypium barbadense. American upland cotton is cultivated in the Rabi (winter) crop season from July to August and is harvested in December and January. Other varieties are cultivated in the Kharif (summer) crop season from March to April and harvested in December and January. Production for the 2023 marketing year is expected to remain at 155 thousand bales.

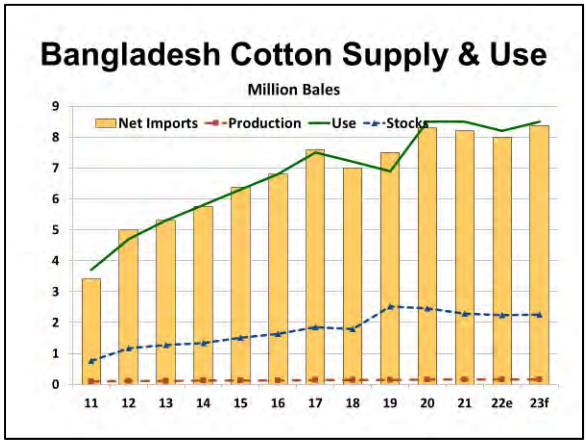


Figure 99 - Bangladesh Cotton Supply & Use

In terms of consumption, marketing year 2022 mill use was estimated at 8.2 million bales and an increase is expected in the 2023 marketing year with an estimate of 8.5 million bales.

As a result of increasing demand for quality cloth, raw cotton imports have steadily grown. Net imports were estimated to be 8.0 million bales for the 2022 marketing year and are projected to increase in 2023 to roughly 8.4 million bales.

U.S. Trade

For the 2022 marketing year, net U.S. exports of raw cotton are estimated to be 11.8 million bales (Figure 100), which is 28.0 % of world exports. It was estimated that exports will constitute roughly 84.3% of total use for the 2022 marketing year.

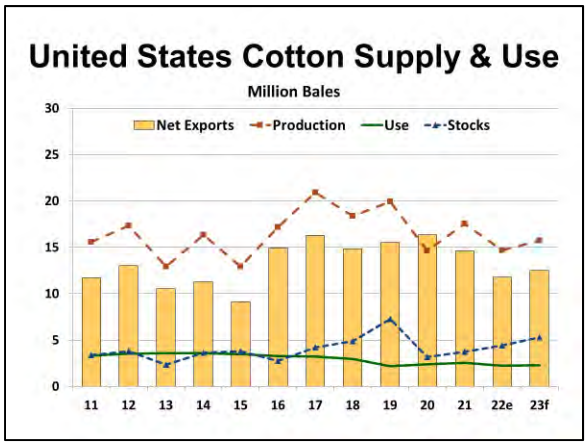


Figure 100 – U.S. Cotton Supply & Use

Customers of U.S. exports have changed throughout the years. China remains one of the largest customers of U.S. cotton along with Pakistan, Turkey, Vietnam, Mexico, and Bangladesh (Figure 101).

Top U.S. Raw Cotton Export Destinations

2010		2022YTD	
Country	(1,000 480-Lb. Bales)	Country	(1,000 480-Lb. Bales)
China	4,860	China	2,072
Turkey	2,076	Pakistan	1,898
Mexico	1,244	Turkey	1,348
Indonesia	889	Vietnam	930
Vietnam	717	Mexico	904
Thailand	712	Bangladesh	630

Figure 101 - Top U.S. Raw Cotton Export Destinations

With China remaining a top export destination for U.S. cotton, and increased demand from other importing countries, an increase in net exports to 12.5 million bales is expected for the 2023 marketing year. The U.S. share of world exports is expected to remain at 28.0% for the 2023 marketing year. For 2017-2021, the average U.S. share of world exports was 36.0%. For the 2022 and 2023 marketing years, lower U.S. production along with higher production in Brazil and Australia has resulted in a decline in the U.S. market share. The U.S. will continue to face intense competition as Brazil continues to expand cotton acreage.

World Trade

In the 2022 marketing year, world cotton trade dropped to roughly 41.6 million bales (Figure 102). Current projections put 2023 marketing year trade at 44.2 million bales. As previously discussed, U.S. net exports are projected to be 12.5 million bales in the 2023 marketing year.

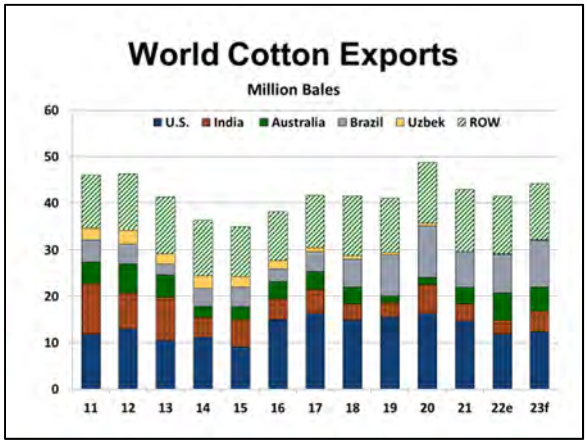


Figure 102 - World Cotton Exports

For 2023, cotton imports are projected to increase in most of the major cotton importing countries. (Figure 103).

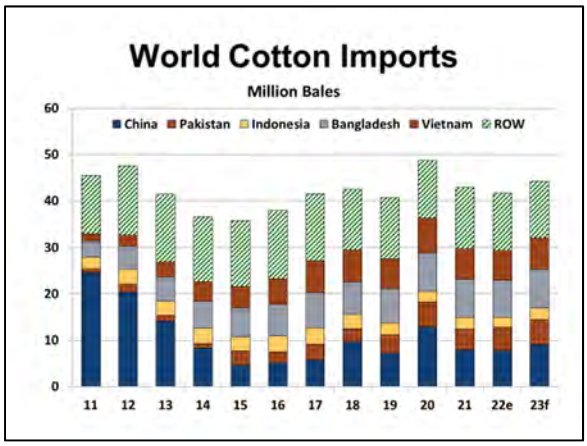


Figure 103 - World Cotton Imports

Examining the world trade-to-mill use ratio for the 2022 marketing year shows a slight increase to 37.4% from 36.5% in 2021(Figure 104). For 2023, the ratio is expected to increase slightly to 38.1%

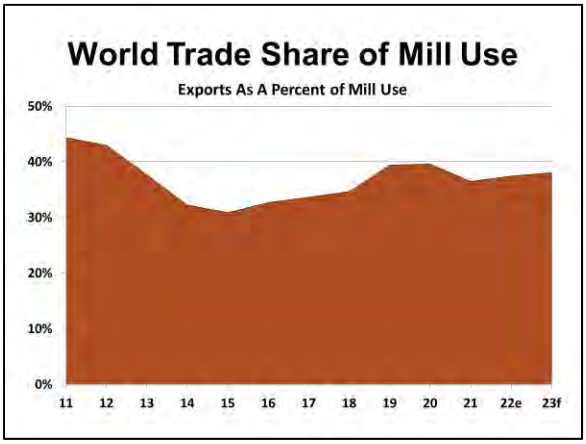


Figure 104 - World Trade Share of Mill Use

World Ending Stocks

For the 2023 marketing year, ending stocks are estimated to fall to 89.9 million bales (Figure 105). The two largest producers – China and India – will continue to be significant holders of cotton stocks due in part to various government programs.

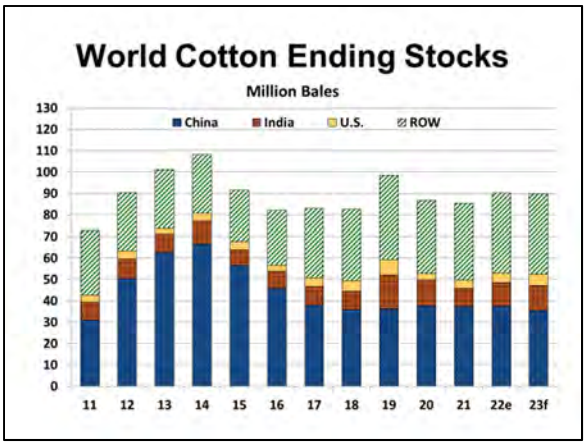


Figure 105 - World Cotton Ending Stocks

The projected world stocks-to-use ratio falls to 77.5% for the 2023 marketing year (Figure 106). As global stocks continue to fall, a stronger case can be made for improved prices.

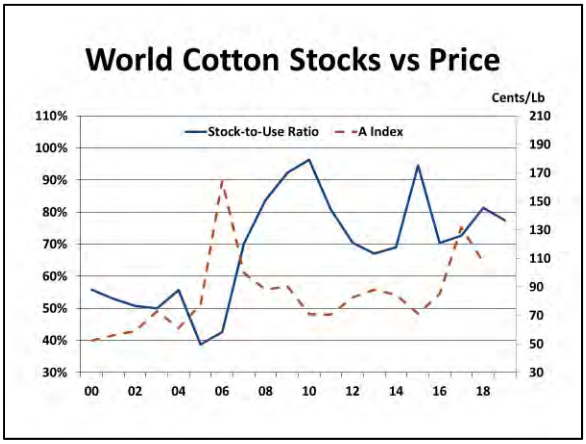


Figure 106 - World Cotton Stocks vs Price