

# *The Economic Outlook* FOR U.S. COTTON 2022

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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 global economy recovered at a much faster pace than expected as COVID-19 restrictions were relaxed and world economies reopened. Strong world cotton demand has resulted in the highest cotton prices in a decade. However, the lingering effects of the COVID-19 pandemic's shock to global trade have created an unprecedented level of stress and disruption on the entire supply chain, from transportation costs to labor availability.

With cotton's heavy reliance on export markets, the port issues have created major delays and increased costs for merchandisers due to large import volumes, limited container availability, port congestion, and transshipment delays. Initially, port congestion mainly impacted the West Coast ports, but has now spread to the East Coast due to the record level of goods flowing into and out of the country combined with labor shortages.

Along with the labor and port issues, the supply chains critical for inputs and sales of agricultural goods faced multiple and simultaneous challenges in 2021. Issues include trucking and rail freight congestion, equipment shortages, and constrained capacity; reduced fertilizer availability and cost increases due to increased global demand, weather disruptions, trade actions, and increased transportation and natural gas costs; regulatory actions limiting pesticide use; disruption to herbicide production and barge traffic from Hurricane Ida; large increases in energy costs; and lack of availability and increased costs for equipment and parts.

Now, in the early weeks of 2022, the supply chain disruptions continue to impact the U.S. and world cotton market and the COVID-19 Omicron variant is creating disruptions in various parts of the world.

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. Current economic projections for the U.S. and global economies should be viewed with caution given the continued impacts of the COVID-19 pandemic, rising energy prices, supply chain disruptions, geopolitical tensions, higher than expected inflation, and slowing economic growth.

In 2021, U.S. growers planted 11.2 million acres, which was 7.2% lower than in 2020. Weather issues during the 2021 planting season resulted in fewer acres than intended in some regions of the Cotton Belt. Strong prices of competing commodities also impacted cotton acreage decisions in 2021. During the 2021 planting season, cotton futures prices were trading between 80 and 85 cents per pound.

In the Southwest, planted cotton acreage decreased by 565 thousand acres to 7.0 million acres. Texas producers planted 6.4 million acres in 2021 as compared to 6.8 million acres in 2020. However, since Texas abandonment declined from 52.9% in 2020 to 17.3% in 2021, harvested acreage increased by 2.1 million acres in 2021. While Texas was in a severe drought situation just prior to the 2021 planting season, rainfall in late spring alleviated most of the drought concerns until later in the growing season. In Kansas, 2021 planted area declined to 110 thousand acres as compared to 195 thousand in 2020. Oklahoma's acreage declined to 495

thousand acres as compared to 525 thousand acres in 2020.

In the Southeast, 2021 cotton acreage was 42 thousand acres, or 1.8%, lower than in 2020. Alabama, Florida, Georgia, and Virginia decreased cotton acreage by 10.0%, 7.1%, 1.7%, and 6.3%, respectively. North Carolina and South Carolina increased cotton acreage by 4.2% and 10.5%, respectively.

In 2021, Mid-South growers reduced cotton acreage to 1.6 million acres, which was 9.4% lower than last year. In recent years, Mid-South farmers have demonstrated their ability and willingness to adjust their crop mix based on market signals. Acreage decreased in all Mid-South states in 2021, with the exception of Missouri. For Arkansas, Louisiana, Mississippi, and Tennessee, acreage decreased by 8.6%, 35.3%, 15.1%, and 1.8%, respectively. Missouri acreage increased by 6.8% in 2021.

In the West, 2021 upland acreage declined by 9.9% to 182 thousand acres with lower acreage in Arizona, California, and New Mexico. In 2021, ELS planted acreage decreased by 37.4% to 127 thousand acres, which is the lowest level since 1986. California acreage declined by 40.1%, and Texas acreage declined by 55.3%. Arizona and New Mexico acreage increased by 38.5% and 19.0%, respectively.

In 2021, U.S. abandonment declined to 11.2% as compared to 31.6% in 2020. U.S. production was estimated to be 17.6 million bales in 2021, which was 3.0 million bales higher than the previous year. Upland production was estimated at 17.3 million bales, and ELS growers harvested 367 thousand bales. The January 2022 USDA estimate for 2021 cottonseed production was 5.4 million tons, up 0.9 million tons from the previous year.

In 2021, the Southeast produced 4.5 million bales, up 490 thousand bales from the 2020 total. For 2021, the Mid-South produced 3.8 million bales, which was 276 thousand bales lower than the previous year. At 8.5 million bales, production in the Southwest was 3.0 million bales higher than in 2020. The West produced 477 thousand bales of upland cotton in 2021, down 22 thousand bales from 2020. The 2021 ELS crop of 367 thousand bales was 180 thousand bales lower than the previous year and the lowest level of production since 1994.

For cottonseed, a regional breakdown of 2021 production shows production for the Southwest, Southeast, Mid-South, and West of 2.6 million tons, 1.3 million tons, 1.2 million tons, and 286 thousand tons, respectively.

In 2021, the estimated national average cotton yield of 849 pounds was slightly higher than the previous year but 15 pounds below the 5-year average. 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 and Mid-South experienced above average yields in 2021, while the Southwest and West yields were lower than the 5-year average.

The 2021 Southeast yield of 933 pounds was 108 pounds higher than 2020 and 77 pounds above the 5-year average. In Alabama, the 2021 yield of 846 pounds was 56 pounds higher than 2020 and 43 pounds lower than the 5-year average. In Florida, the 2021 yield of 674 pounds was 143 pounds higher than in 2020 and 63 pounds below the 5-year average. The 2021 Georgia yield of 931 pounds was 44 pounds higher than 2020 and 72 pounds higher than the 5-year average.

The 2021 North Carolina yield of 999 pounds was 240 pounds higher than 2020 and 139 pounds higher than the 5-year

average. In South Carolina, the record 2021 yield of 995 pounds was 193 pounds higher than 2020 and 207 pounds higher than the 5-year average. At 1,232 pounds, the 2021 Virginia yield was the 2<sup>nd</sup> highest yield on record. The 2021 Virginia yield was 461 pounds higher than 2020 and 298 pounds higher than the 5-year average.

In the Southwest, the 2021 average yield of 706 pounds was 14 pounds higher than 2020 and 23 pounds below the 5-year average. In Texas, the yield of 695 pounds was 9 pounds higher than 2020 and 25 pounds lower than the 5-year average. In some areas of Texas, dry conditions late in the growing season resulted in lower yields. The Oklahoma yield of 783 pounds was 82 pounds higher than in 2020 and 23 pounds above the 5-year average. At 950 pounds, the Kansas yield was 168 pounds higher than the previous year and 9 pounds above the 5-year average.

Overall, cotton acreage in the Mid-South produced yields above the 5-year average in 2021. The 2021 Mid-South yield of 1,148 pounds was 40 pounds higher than 2020 and 31 pounds above the 5-year average. In Arkansas, the 2021 yield of 1,263 pounds was a record yield and was 84 pounds higher than in 2020 and 108 pounds above the 5-year average. The 2021 Louisiana yield of 960 pounds was 26 pounds lower than in 2020 and 30 pounds below the 5-year average.

In Mississippi, the 2021 yield of 1,015 pounds was 64 pounds lower than the previous year and 95 pounds lower than the 5-year average. In Missouri, the 2021 yield of 1,293 pounds was 149 pounds higher than 2020 and 97 pounds higher than the 5-year average. The 2021 Tennessee yield of 1,067 pounds was unchanged from 2020 and 11 pounds below the 5-year average.

The average upland yield in the West was estimated at 1,343 pounds, which was 30 pounds higher than 2020 and 7 pounds below the 5-year average. The Arizona yield of 1,291 pounds was 112 pounds higher than 2020 and 34 pounds below the 5-year average. The New Mexico yield of 868 pounds was 185 pounds lower than 2020 and 144 pounds below the 5-year average. The record California yield of 2,071 pounds was 65 pounds higher than 2020 and 404 pounds higher than the 5-year average.

The national average ELS yield of 1,423 pounds was 71 pounds above 2020 and 12 pounds below the 5-year average. Accounting for the majority of ELS acres, California heavily influences the U.S. average. The 2021 record California yield of 1,694 pounds was 132 pounds higher than the previous year and 149 pounds above the 5-year average. At 1,091 pounds, the Arizona ELS yield was 57 pounds higher than 2020 and 169 pounds above the 5-year average. New Mexico's 2021 yield of 600 pounds was the lowest yield since 2000. The 2021 Texas ELS yield of 750 pounds was 84 pounds higher than 2020 and 99 pounds below the 5-year average.

Overall, the quality of the 2021 crop was very good. The 2021 harvest season was a bit later than usual in part due to later planting in some areas. With 16.7 million 480-pound upland bales classed through February 3, the national average staple length (measured in thirty-second's of an inch) was 36.7, up from a 5-year average of 36.5. The average strength of the 2021 upland crop was 30.7 grams per tex (gpt) up from the 5-year average of 30.2. The average micronaire of the 2021 upland cotton crop was 4.2, which was below the 5-year average of 4.3.

Color grades for the 2021 crop were much higher than previous years. In total for the Cotton Belt, 94.0% of the 2021 crop was

grading 41 or better as compared to the 5-year average of 83.1%. In the Southeast, 91.9% of the 2021 crop was grading 41 or better as compared to the 5-year average of 85.0%. At 98.3%, the Mid-South was higher than their 5-year average of 89.1%. In the Southwest, 92.8% of the 2021 crop was grading 41 or better as compared to the 5-year average of 78.5%. In the West, 96.0% of the 2021 crop was grading 41 or better as compared to the 5-year average of 92.3.

The current marketing year began with cotton stocks at 3.2 million bales. When added to the recent harvest, total supplies for the 2021 marketing year are estimated at 20.8 million bales. Total supplies should be more than sufficient to satisfy estimated use of 16.4 million bales.

U.S. exports for the 2021 marketing year are currently estimated at 13.8 million bales, which is 1.2 million bales below the January 2022 USDA estimate. While U.S. export sales have been very strong thus far in the 2021 marketing year, weekly shipments are lagging well behind the 5-year average pace. In addition to the disruptions and delays caused by transportation issues, cotton shipments in the early months of 2021 marketing year suffered from a lack of available supply. A smaller crop in 2020 combined with strong export demand resulted in lower ending stocks for the 2020 crop year. With low stocks and a late harvest in 2021, cotton was simply not available to ship earlier in the marketing year.

As of January 27, total commitments reached 12.8 million bales while 4.2 million bales had been shipped. Current shipments are 3.1 million bales behind last year and 1.1 million bales behind the 5-year average. On an encouraging note, weekly shipments reached the highest level of the marketing year at the end of January with 326 thousand bales shipped. However, to reach 13.8 million bales in shipments by July 31,

average weekly shipments for the remainder of the marketing year will need to be about 14.0% higher than the average 10-year pace.

U.S. textile mills are expected to consume 2.6 million bales in the current marketing year, which is slightly above the January 2022 USDA estimate. U.S. mill use has continued to recover following the shutdowns in 2020 and the ongoing labor issues. The Economic Adjustment Assistance for Textile Mills (EAATM), reauthorized and renamed in the 2018 Farm Bill, continues to be an important source of stability, allowing mills to invest in new facilities and equipment.

With lower exports for the 2021 crop year, U.S. ending stocks are projected to increase to 4.4 million bales, or 1.2 million bales higher than the previous year.

Looking ahead to the 2022 planting season, several factors will influence U.S. acreage decisions, including market volatility, weather events, and general agronomic conditions.

The 2022 cotton harvest-time futures contracts are currently trading at higher levels than a year ago. In mid-January, the December 2022 contract was trading at \$0.96 per pound as compared to \$0.73 per pound a year-ago. In early February, prices had increased to \$1.04 per pound as compared to \$0.78 per pound in early February 2021.

Corn prices increased during the first half of 2021. However, in the second half of 2021, corn prices were more volatile but generally trended upward. In mid-January 2022, the December 2022 contract for corn was trading at \$5.58 per bushel, as compared to \$4.60 a year ago. Prices increased to \$5.68 per bushel in early February.

Soybean prices, as measured by the Chicago Board of Trade November futures contract, increased during the first half of 2021, but trended downward during the second half. In mid-January, the November 2022 contract traded at \$13.04 per bushel, as compared to \$11.98 per bushel a year earlier. In early February, prices increased to \$13.89 per bushel.

A critical component of the economic outlook is the NCC's annual planting intentions survey. The 2022 survey was distributed in mid-December with responses collected through mid-January. Respondents were asked to provide their plantings of cotton, corn, soybeans, wheat, and 'other crops' for 2021 and intended acreage for 2022. 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.

Relative to the average futures prices in the first quarter of 2021, cotton prices during the 2022 survey period were up by 14.4%, corn prices were trading about 19.9% higher, and soybean prices were trading 7.2% higher. In 2021, the January-March average futures prices for cotton, corn, and soybeans were \$0.81 per pound, \$4.60 per bushel, and \$11.91 per bushel, respectively. During the 2022 survey period, the average futures prices for cotton, corn, and soybeans were \$0.93 per pound, \$5.51 per bushel, and \$12.76 per bushel. As compared to the average prices in January-March 2021, the cotton-to-corn price ratio during the 2022 survey period was lower (2021-17.6, 2022-17.3) and the cotton-to-soybean price ratio was higher (2021-6.8, 2022-7.3).

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.

While an increase or decrease in the price ratio generally indicates an increase or decrease in cotton acreage, producers also consider relative returns of competing commodities. For 2022, production costs and input availability will be key factors in acreage decisions, particularly with higher inflation and supply chain disruptions. Most producers are expecting a significant increase in input costs in 2022, largely due to higher fertilizer and chemical costs. Since fertilizer costs generally constitute a larger percentage of the production budget for corn (as compared to cotton and soybeans), fertilizer price and availability will likely have a larger impact on corn acreage in 2022.

A review of the Council's survey will begin with a look at the Southeast. Again, the survey results should be viewed as a measure of grower intentions prevailing at the time the survey was conducted. Weather, prices, and input costs/availability could cause actual plantings to be significantly different from growers' stated intentions during the survey period.

In the Southeast, survey results indicate a 3.7% increase in the region's upland area to 2.4 million acres. Cotton acreage is expected to increase in Alabama, Georgia, North Carolina, South Carolina, and Virginia, while Florida producers indicate a small drop in acreage. In Alabama, the survey responses indicate a 5.0% increase in cotton acreage. Alabama growers intend to plant less corn and 'other crops' and more soybeans and wheat. In Florida, respondents indicated slightly less acreage of cotton, corn and 'other crops', and more soybeans. In Georgia, cotton acreage is expected to increase by 1.3% to 1.2 million acres.



Georgia growers expect to plant less corn and wheat and more soybeans, and ‘other crops’, likely peanuts.

In North Carolina, an 8.0% increase in cotton acreage is expected. Acreage of corn, soybeans, and wheat is expected to decline while acreage of ‘other crops’ is expected to increase. In South Carolina, acreage is expected to increase by 10.0%. South Carolina growers expect to plant less corn and more soybeans and ‘other crops’. Cotton acreage is expected to increase by 4.7% in Virginia. Virginia growers intend to plant less corn, slightly less soybeans and wheat, and more ‘other crops’.

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 1.9 million acres, an increase of 14.6% from the previous year.

Across the region, all states intend to increase cotton acreage. In Arkansas, acreage is expected to increase by 15.7% to 555 thousand acres in 2022. Arkansas growers expect to plant less corn and ‘other crops’, and more soybeans and wheat. Louisiana growers expect to plant 166 thousand acres, which is 51.2% higher than last year. Louisiana growers expect to plant less corn, wheat, and ‘other crops’, and more soybeans. In Mississippi, respondents expect to plant 479 thousand acres, which is 6.5% higher than last year. Mississippi respondents expect to plant less corn, wheat, and ‘other crops’ and more soybeans. Missouri growers expect to increase cotton acres by 5.9% to 334 thousand acres. Missouri growers expect to plant less corn and ‘other crops’ and more soybeans and wheat. In Tennessee, cotton acreage is expected to increase by 21.1% to 333 thousand acres. Tennessee growers expect to

plant less corn, and more soybeans and wheat.

Growers in the Southwest intend to plant 7.4 million acres of cotton, an increase of 7.0%. Increased cotton area is expected in all states in the region. In Kansas, producers intend to plant 15.2% more cotton acres in 2022. Kansas growers intend to plant more corn, wheat, and soybeans, and less ‘other crops’, likely sorghum. In Oklahoma, a 5.6% increase in cotton acreage is expected. Oklahoma producers expect to plant more wheat and less soybeans and ‘other crops’.

Overall, Texas acreage is expected to increase by 6.9%. In south Texas, respondents indicate a 4.6% increase in cotton acreage. South Texas growers intend to plant more corn, wheat, and soybeans and less sorghum. Respondents from the Blacklands indicate an increase of 32.3% in cotton acreage, and a decrease in corn, wheat, and sorghum. In West Texas, respondents indicated a 5.9% increase in cotton. West Texas growers expect to plant less wheat and sorghum and slightly more corn.

With intentions of 156 thousand acres, producers in the West expect to plant 14.1% fewer acres of upland cotton. Drought conditions and water availability issues continue to impact growers in the West. Cotton acreage is expected to decrease in Arizona and California and increase slightly in New Mexico. The survey results for Arizona suggest a 22.7% decrease in upland cotton acres, less corn and ‘other crops’, and more wheat. In California, growers intend to plant 7.7% less upland cotton and less corn, wheat, and ‘other crops’. In New Mexico, cotton acreage is expected to increase by 10.0% in 2022. New Mexico growers intend to plant less corn, wheat, and ‘other crops’ in 2022. Summing across the 4 regions gives intended 2022 upland cotton area of 11.9 million acres, 7.1% above 2021.

Overall, the survey indicates that growers intend to plant 24.8% more ELS cotton in 2022 as ELS prices have reached a record level. California growers expect to plant 30.4% more ELS cotton, while Arizona growers expect to plant 5.9% more ELS cotton in 2022. New Mexico ELS acreage is expected to increase by 11.0%, while Texas growers expect to increase ELS acreage by 16.3%.

Across the four states, cotton growers intend to plant 158 thousand ELS acres in 2022. Summing together the upland and ELS cotton intentions shows U.S. all-cotton plantings in 2022 of 12.0 million acres, 7.3% higher than in 2021.

Since the 2022 survey period (December 14, 2021 - January 17, 2022), futures prices have continued to increase. By early February, the Dec/Nov 2022 futures prices for cotton, corn, and soybeans had increased to \$1.04 per pound, \$5.68 per bushel, and \$13.89 per bushel, respectively. The corresponding early February price ratios moved in cotton's favor with the cotton-to-corn price ratio increasing to 18.3, while the cotton-to-soybean price ratio increased to 7.5. Producers will continue to monitor changes in commodity prices and input costs before finalizing their 2022 acreage decisions.

Although cotton prices are higher than in recent years, higher input prices and supply chain disruptions have resulted in significant increases in production costs for 2022. As a result, many producers continue to face difficult economic conditions heading into 2022. Input costs have reached elevated levels in 2022 and cotton prices may not be high enough to cover all production expenses, particularly if weather issues result in average or below average yields. Planted acreage is just one of the factors determining supplies of cotton and cottonseed. Ultimately, weather events,

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. However, it is important to remember the volatility around projected production given the uncertainty of weather patterns.

Based on the state-level 10-year average abandonment rates and 5-year average yields, 2022 harvested area is estimated to be 9.8 million acres with an overall abandonment rate of 18.9%. U.S. production is estimated to be 17.3 million bales with an average yield of 850 pounds per acre, which includes 16.8 million upland bales and 438,000 ELS bales.

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 21.6 million bales. This is an increase of 850 thousand bales from the 2021 level.

NCC projects domestic mill use of cotton at 2.7 million bales for the 2022 marketing year, 120 thousand bales above the 2021 estimate. As one of the largest markets for U.S. cotton, U.S. mills continue to be critically important to the health of the cotton industry. In the face of rising textile imports from Asian suppliers, the U.S. textile industry has focused on new investment and technology adoption in order to remain competitive. Preserving important trading arrangements in the Western Hemisphere is also critical to the health of the U.S. textile industry.

Now, we will turn our attention to the world market with a review of 2021 and then discuss prospects for the 2022 marketing year.



World cotton production increased in 2021 to an estimated 121.0 million bales due to higher acreage and yields. As compared to 2020, India's crop of 27.5 million bales was 100 thousand bales lower, while China's 2021 crop declined by 2.5 million bales to 27.0 million. Australia's 2021 production was estimated to be 5.5 million bales as compared to 2.8 million bales in 2020 due to significantly higher acreage. Pakistan's production was estimated to be 5.8 million bales in 2021 as compared to 4.5 million in 2020. Turkey's 2021 production of 3.8 million bales was 900 thousand bales higher than in 2020. Brazil's 2021 estimated production of 13.2 million bales was 2.4 million bales higher than 2020 due to higher acreage and yields.

World consumption was expected to be 124.3 million bales in the 2021 marketing year, which was 3.4 million bales higher than 2020. China was projected to consume 39.5 million bales in 2021, which was 500 thousand bales lower than in 2020. The gap between China's cotton consumption and production is currently 12.5 million bales.

For the 2021 marketing year, China's imports were projected at 9.7 million bales, which was 3.2 million bales lower than in 2020.

The Phase 1 trade agreement with China resulted in additional demand for U.S. cotton in 2020 and 2021. As part of the agreement, China agreed to purchase an annual average of \$40 billion in U.S. agricultural commodities, including cotton, in 2020 and 2021. For the 2020 calendar year, U.S. exports of agricultural products to China were approximately \$27.0 billion, which included \$1.8 billion in U.S. raw cotton exports. For the January through November 2021 time period, U.S. exports of agricultural products to China were approximately \$30.0 billion, with \$1.2 billion in U.S. raw cotton fiber exports.

While cotton specific details were not disclosed in the Phase I agreement, China was expected to import between 4.0 and 6.0 million bales each calendar year based on historical data. China imported 4.5 million bales of U.S. cotton in 2020 and 3.8 million bales of U.S. cotton in 2021 as compared to 1.7 million bales in 2019. Although the Phase I agreement did not include specific commitments for 2022, China's current tariff exclusion process applicable to U.S. cotton is assumed to continue throughout the timeframe of the economic outlook.

While world trade was estimated to be lower in the 2021 marketing year, the U.S. remains the largest exporter of cotton with an estimated market share of 29.8%, as compared to 33.6% in 2020. For 2021, the estimated market share for the other top exporting countries was 18.6% for Brazil, 12.7% for India, and 9.1% for Australia.

World consumption was estimated to exceed world production in the 2021 marketing year. Ending stocks were estimated to decrease by 3.4 million bales to 85.0 million bales with a stocks-to-use ratio of 68.4%. Chinese stocks were estimated to decline by 2.9 million bales in 2021. Stocks outside of China were estimated to decline in 2021 by 523 thousand bales to 48.6 million bales.

For the 2022 marketing year, world area is projected to increase by 4.0% to 84.0 million acres as a result of higher cotton prices. World production is estimated to increase by 1.6 million bales in 2022 to 122.6 million bales. World mill use is projected to increase by 1.3% to 125.9 million bales for the 2022 marketing year, which represents an all-time high for cotton demand. With expanded consumption in key importing countries, world trade is projected to increase to 48.3 million bales. World ending stocks are projected to decline by 3.4 million bales in the 2022 marketing year to

81.6 million bales, resulting in a stocks-to-use ratio of 64.8%.

A key factor shaping the global cotton market is the ongoing political tensions between China and the United States. 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.

In early 2021, a Withhold Release Order (WRO) was issued for all cotton and cotton products from the Xinjiang region. In December 2021, the Uyghur Forced Labor Prevention Act was signed into law by President Biden. 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. As of early February, the full impacts of these new restrictions are unclear, but implementation of the law has the potential to reshape cotton sourcing and trade flows of cotton and cotton textile products.

With that caveat in mind, the current outlook projects China's imports in the 2022 marketing year to increase to 11.2 million bales as mill use shows modest growth and production declines. The deficit between domestic production and consumption along with lower reserve stocks contribute to the increased trade position.

For the U.S. balance sheet, exports in the 2022 marketing year are projected to

increase to 15.8 million bales. Brazil's exports are projected to increase by 658 thousand bales in 2022 to 9.3 million. For Australia, exports are projected to increase by 1.0 million bales to 5.2 million in 2022. India's exports are projected to decline by 965,000 bales in 2022 to 4.9 million. Based on these projections, the share of 2022 world exports for the top four exporting countries would be 32.8% for the U.S., 19.2% for Brazil, 10.8% for Australia, and 10.2% for India.

When combined with 2.7 million bales of U.S. mill use, total offtake exceeds expected production and ending stocks are projected to decline to 3.1 million bales.

While the Council's economic outlook does not attempt to project cotton prices, it is important to review some of the factors shaping the current price situation. A tighter U.S. balance sheet, reduced supply chain inventories, speculative money flow, higher commodity prices, and strong demand are creating a bullish sentiment for cotton prices. However, additional restrictions related to the COVID-19 pandemic, a slow-down in world economic activity, and low man-made fiber prices could put downward pressure on cotton prices in 2022. As with any projections, there are uncertainties and unknowns that can change the outcome.

Despite the setbacks and short-term challenges that have occurred during this past year, the overall trends for cotton demand remain promising as the global economy continues to expand and world population increases.

**Table 1 - Balance Sheet for Selected Countries & Regions**

<b>World</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
Harvested Area (Thou Acres)	82,289	85,815	77,577	80,792	83,983
Yield (Pounds/Acre)	693	677	691	719	701
Production (Thou Bales)	118,775	120,986	111,704	120,957	122,623
Trade (Thou Bales)	42,435	40,810	49,010	46,295	48,335
Mill Use (Thou Bales)	120,460	103,073	120,874	124,271	125,933
Ending Stocks (Thou Bales)	79,697	97,300	88,414	84,991	81,579
<b>United States</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
Harvested Area (Thou Acres)	9,990	11,498	8,275	9,968	9,759
Yield (Pounds/Acre)	882	831	847	849	850
Production (Thou Bales)	18,367	19,913	14,608	17,624	17,272
Net Exports (Thou Bales)	14,830	15,509	16,370	13,811	15,827
Mill Use (Thou Bales)	2,975	2,150	2,400	2,580	2,700
Ending Stocks (Thou Bales)	4,850	7,250	3,150	4,354	3,099
<b>Australia</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
Harvested Area (Thou Acres)	939	148	680	1,544	1,575
Yield (Pounds/Acre)	1,125	2,023	1,978	1,709	1,650
Production (Thou Bales)	2,200	625	2,800	5,500	5,415
Net Exports (Thou Bales)	3,632	1,360	1,564	4,200	5,200
Mill Use (Thou Bales)	35	35	35	35	35
Ending Stocks (Thou Bales)	1,572	802	2,003	3,268	3,448
<b>Bangladesh</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
Harvested Area (Thou Acres)	109	111	111	111	110
Yield (Pounds/Acre)	609	613	626	652	659
Production (Thou Bales)	138	142	145	151	151
Net Imports (Thou Bales)	7,000	7,500	8,750	8,300	8,431
Mill Use (Thou Bales)	7,200	6,900	8,500	8,800	8,930
Ending Stocks (Thou Bales)	1,783	2,515	2,900	2,541	2,183
<b>Brazil</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
Harvested Area (Thou Acres)	4,052	4,114	3,385	3,954	4,072
Yield (Pounds/Acre)	1,540	1,608	1,534	1,603	1,562
Production (Thou Bales)	13,000	13,780	10,820	13,200	13,249
Net Exports (Thou Bales)	6,001	8,932	11,002	8,575	9,243
Mill Use (Thou Bales)	3,400	2,700	3,100	3,200	3,250
Ending Stocks (Thou Bales)	12,256	14,404	11,119	12,544	13,300
<b>China</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
Harvested Area (Thou Acres)	8,649	8,525	8,031	7,660	7,629
Yield (Pounds/Acre)	1,540	1,534	1,763	1,692	1,670
Production (Thou Bales)	27,750	27,250	29,500	27,000	26,544
Net Imports (Thou Bales)	9,427	6,979	12,851	9,600	11,150
Mill Use (Thou Bales)	39,500	33,000	40,000	39,500	39,750
Ending Stocks (Thou Bales)	35,670	36,899	39,250	36,350	34,294
<b>India</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
Harvested Area (Thou Acres)	31,135	33,111	32,123	30,640	32,785
Yield (Pounds/Acre)	401	413	412	431	421
Production (Thou Bales)	26,000	28,500	27,600	27,500	28,746
Net Exports (Thou Bales)	1,721	920	5,345	4,900	3,835
Mill Use (Thou Bales)	24,300	20,000	25,000	26,000	26,500
Ending Stocks (Thou Bales)	8,604	16,184	13,439	10,039	8,450

**Table 1 – Selected Countries and Regions (Continued)**

<b>Indonesia</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
Harvested Area (Thou Acres)	5	5	5	5	5
Yield (Pounds/Acre)	291	291	194	194	233
Production (Thou Bales)	3	3	2	2	2
Net Imports (Thou Bales)	3,045	2,508	2,301	2,495	2,530
Mill Use (Thou Bales)	3,150	2,400	2,450	2,500	2,525
Ending Stocks (Thou Bales)	532	643	496	493	500
<b>Mexico</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
Harvested Area (Thou Acres)	600	556	358	371	463
Yield (Pounds/Acre)	1,387	1,355	1,366	1,360	1,382
Production (Thou Bales)	1,735	1,570	1,020	1,050	1,334
Net Imports (Thou Bales)	329	-70	440	825	672
Mill Use (Thou Bales)	2,000	1,475	1,700	1,900	1,925
Ending Stocks (Thou Bales)	694	694	429	379	435
<b>Pakistan</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
Harvested Area (Thou Acres)	5,683	6,054	5,436	4,942	5,535
Yield (Pounds/Acre)	642	492	397	563	537
Production (Thou Bales)	7,600	6,200	4,500	5,800	6,190
Net Imports (Thou Bales)	2,790	3,920	5,300	5,400	5,595
Mill Use (Thou Bales)	10,700	9,400	10,700	11,200	11,400
Ending Stocks (Thou Bales)	2,495	3,190	2,265	2,240	2,600
<b>Turkey</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
Harvested Area (Thou Acres)	1,285	1,408	865	1,112	1,357
Yield (Pounds/Acre)	1,401	1,176	1,610	1,640	1,572
Production (Thou Bales)	3,750	3,450	2,900	3,800	4,442
Net Imports (Thou Bales)	2,894	4,222	4,742	4,550	4,350
Mill Use (Thou Bales)	6,900	6,600	7,700	8,500	8,600
Ending Stocks (Thou Bales)	1,694	2,766	2,708	2,558	2,750
<b>Uzbekistan</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
Harvested Area (Thou Acres)	2,718	2,496	2,409	2,422	2,506
Yield (Pounds/Acre)	578	673	697	674	651
Production (Thou Bales)	3,275	3,500	3,500	3,400	3,402
Net Exports (Thou Bales)	750	450	400	185	75
Mill Use (Thou Bales)	2,800	3,000	3,150	3,300	3,350
Ending Stocks (Thou Bales)	1,158	1,208	1,158	1,073	1,050
<b>Vietnam</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
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)	6,940	6,480	7,310	7,450	7,670
Mill Use (Thou Bales)	7,000	6,600	7,300	7,500	7,650
Ending Stocks (Thou Bales)	1,228	1,111	1,124	1,077	1,100
<b>West Africa</b>	<b>18/19</b>	<b>19/20</b>	<b>20/21</b>	<b>21/22</b>	<b>22/23</b>
Harvested Area (Thou Acres)	7,280	7,670	5,923	7,630	7,650
Yield (Pounds/Acre)	357	363	388	388	369
Production (Thou Bales)	5,420	5,802	4,785	6,165	5,887
Net Exports (Thou Bales)	5,456	4,602	5,305	6,100	5,790
Mill Use (Thou Bales)	163	133	133	133	118
Ending Stocks (Thou Bales)	1,395	2,462	1,809	1,741	1,720

## U.S. and World Economy

In the early weeks of 2022, the short-term outlook for economic growth has slowed a bit due to continued concerns regarding the rapid spread of the Omicron variant. While the variant appears to result in fewer serious complications, the widespread transmission rate has resulted in further disruptions to the labor market.

The International Monetary Fund (IMF) January 2022 *World Economic Outlook* noted that the global economy is in a weaker position than previously expected as the Omicron variant continues to spread. According to the IMF, rising energy prices and supply disruptions have resulted in higher-than-expected inflation in the U.S. and many emerging market and developing economies.

The Wells Fargo Securities January 2022 *Monthly Outlook* also included a similar assessment and outlook for the global economy. The Omicron variant is slowing economic growth during the first quarter of the year. For the U.S., the 2021 fourth quarter and 2022 first quarter GDP growth forecasts were revised downward due to higher inflation. The Federal Reserve is expected to increase interest rates earlier and more aggressively than previously expected, with potentially four increases in 2022, possibly beginning in March.

The latest survey of consumer attitudes reports the second lowest level of consumer confidence in a decade. As measured by the Reuters/University of Michigan's Consumer Sentiment Index, consumer confidence has averaged 70.3 in the past six months due to the Delta and Omicron variants and the increasing inflation rate. Confidence in government economic policies is at the lowest level since 2014. Overall, 33.0% of respondents indicated that their financial

situation had declined from a year earlier. The index declined in January 2022 to 68.8, as compared to 79.0 in January 2021 (Figure 1). During the first half of 2021, the average index value was 82.7 but declined throughout the second half of 2021. The index is designed to gauge the attitudes of the American consumer with regards to the economy.

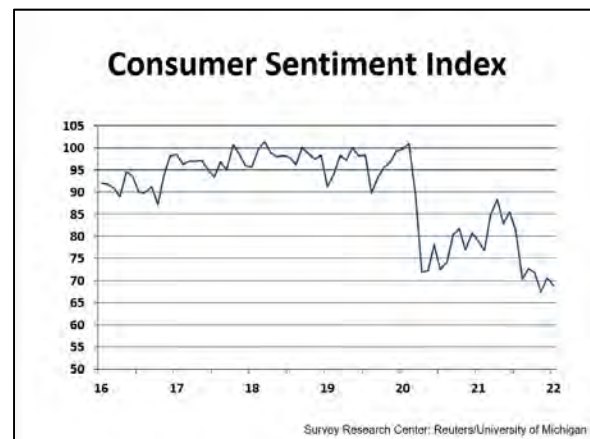


Figure 1 - Consumer Sentiment Index

Almost half of the respondents expect real income to decline in 2022. According to the survey, consumers anticipate a higher inflation rate of 4.9% in 2022 and a lower inflation rate of 3.1% over the next five years.

### U.S. Gross Domestic Product

As determined by the Bureau of Economic Analysis (BEA), U.S. 2021 preliminary fourth quarter real Gross Domestic Product (GDP) increased by 6.9% (Figure 2), while third quarter GDP increased by 2.3%. The increase in real GDP primarily reflected increases in private inventory investment, exports, personal consumption expenditures (PCE), and nonresidential fixed investment that were partially offset by lower federal, state, and local government spending.

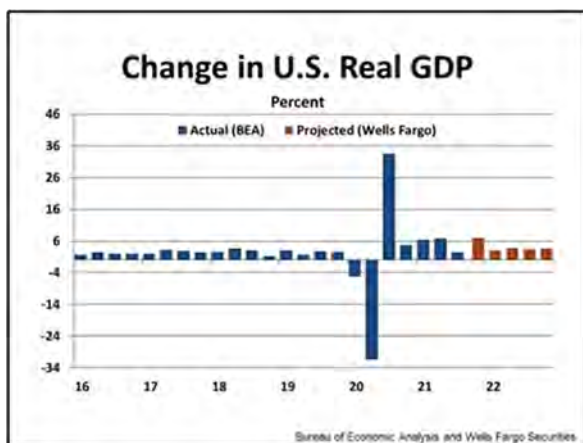


Figure 2 - Change in U.S. Real GDP

The Wells Fargo January 2022 *Monthly Outlook* projected GDP for the fourth quarter of 2021 at 5.9% and a 2021 annual rate of 5.6%. Economic growth is projected to slow down in the first quarter of 2022 at a rate of 2.9%, but the economy is projected to expand by 3.7% in the 2<sup>nd</sup> quarter and 3.4% in the 3<sup>rd</sup> quarter. Business fixed investment is expected to increase by 4.1% in 2022, as compared to an estimated 7.3% in 2021 and -5.3% in 2020. The latest IMF projections take a similar tone regarding U.S. GDP with a 5.6% growth rate in 2021, followed by a slower growth rate of 4.0% in 2022.

Similar to other measures of economic activity, the ISM Purchasing Managers' Index (PMI) recovered throughout most of 2021 following the large decline in 2020. However, the PMI declined to 58.7 in December 2021 as compared to 61.1 in November. 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 2021 by 3.3% (Figure 3), following an increase of 2.0% in the third quarter and 12.0% in the second quarter. Durable goods increased by 1.6% in the fourth quarter of 2021, 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 2021 fourth quarter growth in PCEs at 5.0%. In 2022, PCEs are projected to increase by 2.3% in the first quarter, 2.5% in the 2<sup>nd</sup> quarter, and 2.6% in the 3<sup>rd</sup> quarter.

## U.S. Employment

Civilian employment has steadily increased following the low in April 2020. In December 2021, civilian employment had recovered to 59.5% of the population (Figure 4).



**Figure 4 - Civilian Employment**

Total nonfarm payroll employment increased by 199,000 in December 2021. Employment increased in leisure and hospitality, professional and business services, manufacturing, construction, and transportation and warehousing.

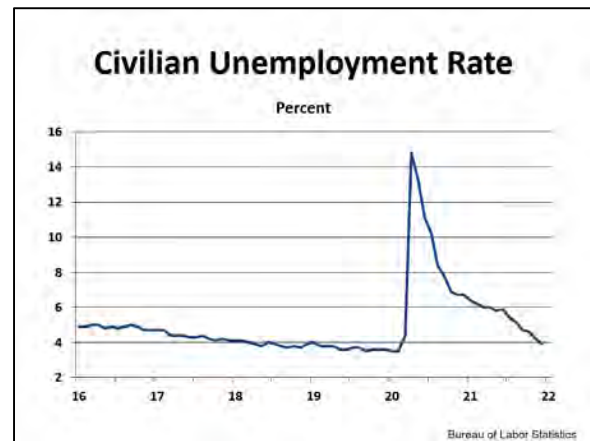
Employment in professional and business services increased by 43,000 in December 2021 but is slightly below the level in February 2020. Employment in food services and drinking establishments increased by 43,000 but is down 653,000 since February 2020. Leisure and hospitality employment increased by 53,000 in December 2021 but is down by 1.2 million since February 2020. Manufacturing added 26,000 jobs in December 2021 but is down by 219,000 since February 2020.

Employment in construction increased by 22,000 in December 2021 but is down 88,000 since February 2020.

Employment in transportation and warehousing increased by 19,000 in December 2021. Employment showed little or no change in other major industries, including retail trade, information, financial activities, health care, other services, and government.

According to the latest government estimates, the December 2021

unemployment rate was 3.9% (Figure 5), as compared to 6.7% at this time a year ago.



**Figure 5 - Civilian Unemployment Rate**

## U.S. Housing Market

The housing industry, a key barometer of the well-being of the economy, showed some improvement in 2021 following the lows in 2020. The number of new housing starts trended upward during 2021 with a larger increase at the end of the year. According to the U.S. Census Bureau, the seasonally adjusted annual rate for new-home construction was 1.7 million units in December 2021 (Figure 6). This is 1.4% above the November 2021 estimate and 13.3% above the October 2021 estimate. As compared to December 2020, the number of new housing starts is 2.5% higher.



**Figure 6 - U.S. New Housing Starts**



According to Freddie Mac, despite the uncertainty this past year, the U.S. housing market was strong in 2021 and remains stable entering into 2022. The demand for housing remains stable, mainly due to low mortgage rates and first-time home buyers. Interest rates are expected to rise in 2022. Mortgage refinances increased in 2021, and as mortgage rates rise in 2022, finance activity will likely slow down. At 3.6%, the 30-year mortgage rate for January 2022 increased by 0.5% from the previous month (Figure 7). In early February 2022, the 30-year mortgage rate increased to 4.1%. The 30-year mortgage rate hovered around 3.0% in 2021. Looking forward, Freddie Mac expects mortgage rates to average 3.9% in 2022.

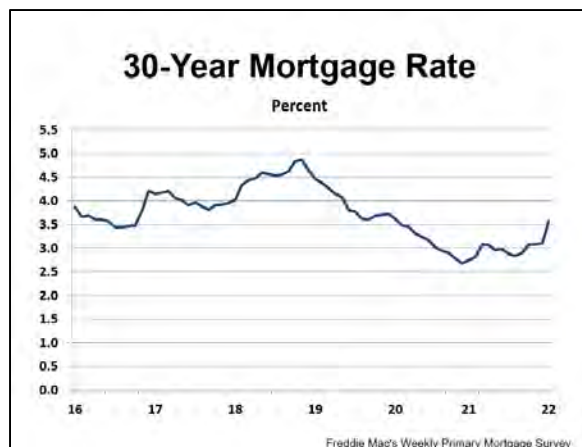


Figure 7 - 30-Year Mortgage Rate

## Federal Reserve Board

According to the minutes from the January 2022 Federal Open Market Committee, the Committee decided to keep the target range for the federal funds rate at 0.0% to 0.25% (Figure 8). Overall financial conditions remain accommodative, in part reflecting policy measures to support the economy and the flow of credit to U.S. households. Progress on vaccinations and an easing of supply constraints are expected to support continued gains in economic activity and employment as well as a reduction in inflation. The Committee seeks to achieve

maximum employment and inflation at the rate of 2.0% over the longer run. In assessing the appropriate stance of monetary policy, the Committee will continue to monitor the implications of incoming information for the economic outlook.

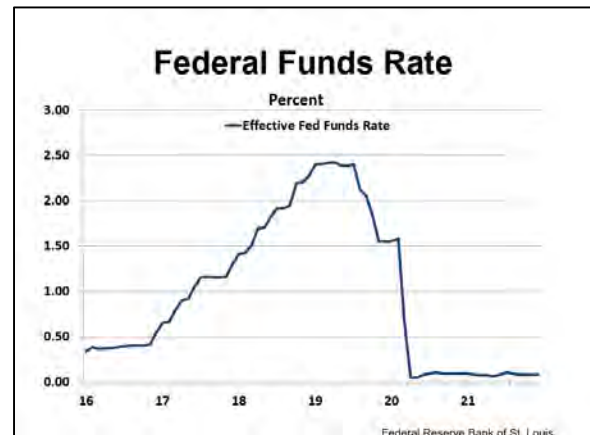


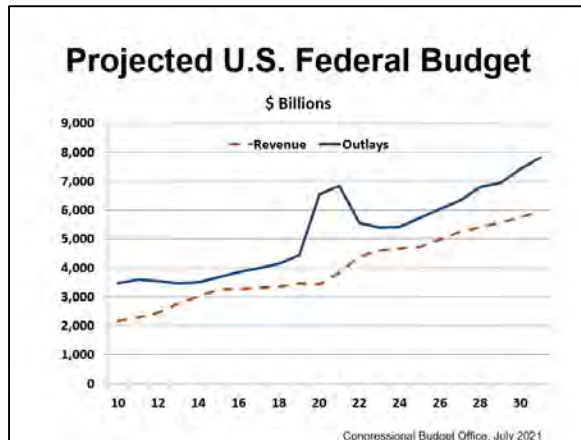
Figure 8 - Federal Funds Rate

A January 2022 *Wall Street Journal* economist survey indicates that over half of the respondents expect the federal reserve to increase rates at least three times this year, with the first increase in March. The respondents indicated that despite a robust recovery in the labor market, the central bank is now in danger of not increasing rates fast enough to keep up with rapidly rising prices. They expect overall economic growth to slow to 3.3% due to higher inflation, supply-chain constraints, and the fast-spreading Omicron variant.

## Federal Budget Situation

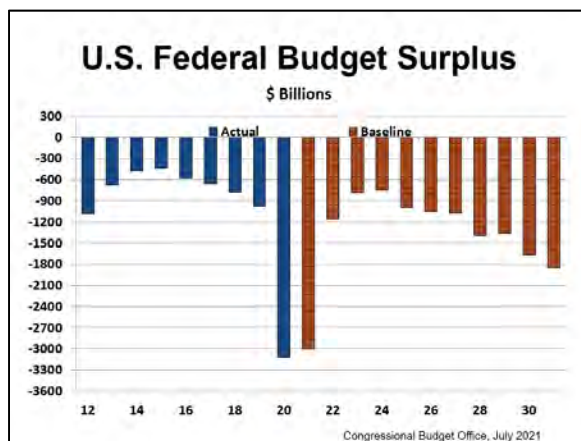
The Congressional Budget Office (CBO) generally releases an annual Budget and Economic Outlook in January. However, for 2022, the report has been delayed until later in February. Based on the most recent budget report in July 2021, CBO projections indicate deficits will fall over the next few years as pandemic-related spending declines. Rising interest costs and greater spending for entitlement programs will result in larger deficits starting in 2025. For fiscal year 2021, federal spending was

estimated at \$6.8 trillion, up from an estimated \$6.6 trillion in 2020, with estimated revenue of \$3.8 trillion (Figure 9), resulting in a deficit of \$3.0 trillion. The deficit in 2021 was projected to be \$126 billion lower than in 2020 and 13.0% of GDP.



**Figure 9 - Projected U.S. Federal Budget**

Outlays are expected to decrease by 19.0% in 2022, and as a result, CBO estimates a deficit of \$1.2 trillion (Figure 10). In 2022, the deficit is projected to be 4.7% of GDP. The deficit is projected to decline in 2023 and 2024 and then steadily increase until 2031. According to CBO's long-term projections, the annual deficit would increase to 5.5% of GDP by 2031.



**Figure 10 - U.S. Federal Budget Surplus**

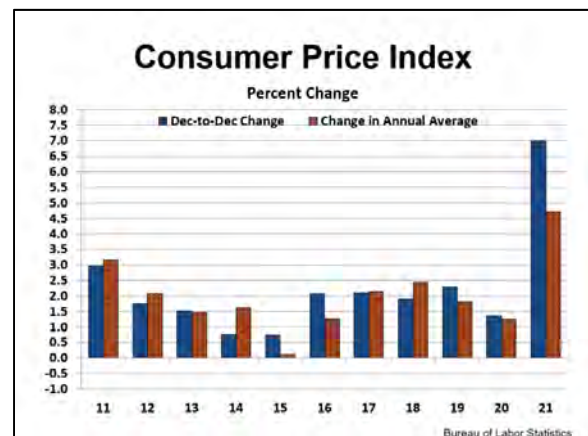
CBO's persistent and growing deficits would result in increasing amounts of

federal debt held by the public. In CBO's baseline projections, that debt rises from 102.7% of GDP in 2021 and would reach 106.4% of GDP by 2031, which is about equal to the peak level in 1946. According to CBO, increasing federal debt makes the economy more vulnerable to rising interest rates and inflation. The growing debt burden increases borrowing costs, slows economic growth and national income, and it increases the risk of a fiscal crisis or a gradual decline in the value of Treasury securities.

## 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 7.0% in 2021, which is the largest December-to-December percent change since 1981. In 2020, the December-to-December change was 1.4% (Figure 11). For 2021, the annual average CPI grew at 4.7%, which is much higher than the 2020 rate of 1.2%.



**Figure 11 - Consumer Price Index**

The index for all items less food and energy also rose by 5.5% over the last 12 months.

The food index rose 6.3% over the last year, while the energy index increased by 29.3%. The gasoline index rose by 49.6% over the last year.

The index for all items less food and energy rose by 0.6% in December as compared to November. The energy index declined by 0.4% in December, which was the first decrease since April 2021. The indexes for electricity, apparel, motor vehicle insurance, recreation, used cars and trucks, new vehicles, shelter, household furnishings and operations, airline fares, and medical care services increased in December.

On a December-to-December basis, the PPI for finished goods increased by 12.4% in 2021 (Figure 12).

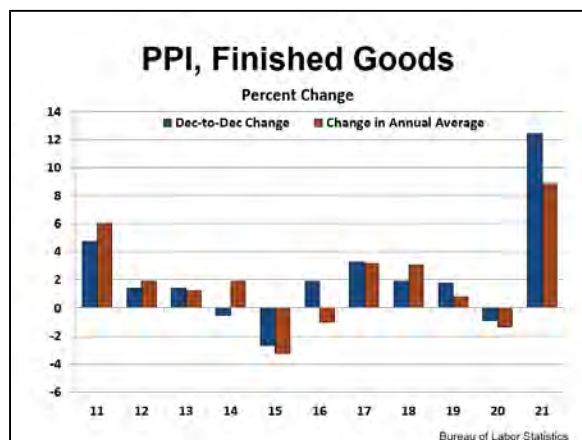


Figure 12 - Producer Price Index, Finished Goods

## Energy Prices and Supply

For 2022, 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 COVID-19 pandemic. In late January 2022, oil prices reached \$82 per barrel as compared to \$52 per barrel at the end of January 2021. In 2021, prices averaged \$57 per barrel.

U.S. fossil fuel production is expected to continue rising in both 2022 and 2023 to reach a new record in 2023. According to the EIA, global oil consumption and production are projected to increase in 2021 and 2022 while global oil inventories are projected to decline.

Global consumption of petroleum and other liquid fuels averaged 96.9 million bbl/d in 2021, up 5.0 million bbl/d from 2020. This growth followed a decline of 8.4 million bbl/d in 2020. Global consumption is projected to increase by 3.6 million bbl/d in 2022 and by 1.8 million bbl/d in 2023. If realized, the 2022 global liquid fuels consumption level would represent a new record for world liquid fuels consumption. Slower growth in global oil demand in 2022 and 2023 mostly reflects slower economic growth.

Uncertainty in global oil markets has increased heading into 2022, particularly with the spread of the Omicron variant. EIA's short-term outlook reflects increased levels of uncertainty due to the ongoing COVID-19 pandemic. EIA expects economic growth to slow in 2022. As a result, EIA expects the pace of oil consumption growth to be dependent on the impact of the Omicron variant on economic activity. Additional restrictions could result in a decline in global oil consumption in the coming months.

Crude oil production from the Organization of the Petroleum Exporting Countries (OPEC) is expected to average 28.8 million bbl/d in 2022, up from an estimated 26.3 million bbl/d in 2021. OPEC crude oil production is projected to increase by 2.5 million bbl/d in 2022. EIA notes that the OPEC crude oil production forecast is subject to considerable uncertainty, driven both by country compliance with existing

production targets and uncertain future global demand growth.

Non-OPEC production increased by 0.7 million bbl/d in 2021 as compared to 2020. Most of this increase came from the U.S., Russia, and Canada. EIA expects production of non-OPEC petroleum and other liquid fuels to increase by 2.8 million bbl/d in 2022. In 2023, EIA expects non-OPEC production to rise by 1.6 million bbl/d. The U.S. and Russia drive the forecasted non-OPEC production growth in 2022 and 2023.

EIA projects that global oil production will outpace global oil consumption in 2022 and 2023, resulting in rising global oil inventories.

Crude oil prices increased throughout most of 2021. Prices reached \$81 per barrel in October 2021, which was the highest monthly average since 2014, then slowly declined to \$72 per barrel by the third week of December (Figure 13). Over the last month, prices have been trending upward to reach \$82 per barrel at the end of January 2022. EIA expects WTI crude oil prices to average \$75 per barrel in 2022 and \$68 per barrel in 2023.

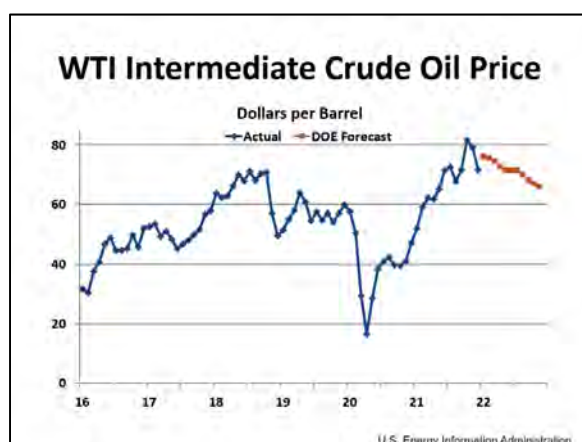


Figure 13 - WTX Intermediate Crude Oil Price

Retail diesel fuel prices (Figure 14), which track closely with crude oil prices, averaged \$3.29 per gallon in 2021, which is 73 cents

per gallon higher than the 2020 average price. The EIA projects diesel prices to average \$3.33 per gallon in 2022 and \$3.27 per gallon in 2023.

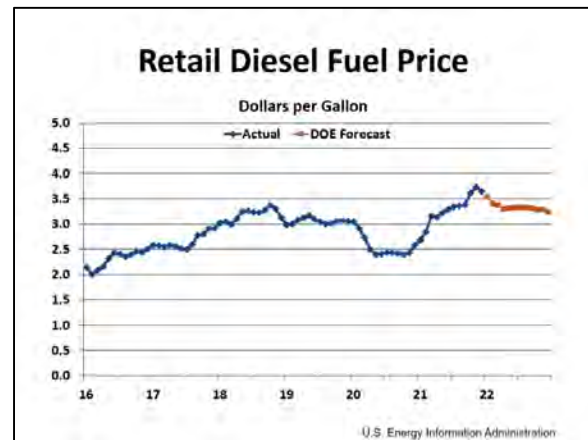


Figure 14 - Retail Diesel Fuel Price

The Henry Hub natural gas spot price averaged \$3.91 per one million British thermal units (MMBtu) in 2021 as compared to \$2.03 per MMBtu in 2020 (Figure 15). Prices were extremely volatile in 2021 and reached near-record levels in February. In January 2022, the spot price averaged \$4.21 per MMBtu as compared to \$2.71 per MMBtu in January 2021. EIA projects an average price of \$3.79 per MMBtu in 2022 and \$3.63 per MMBtu in 2023.

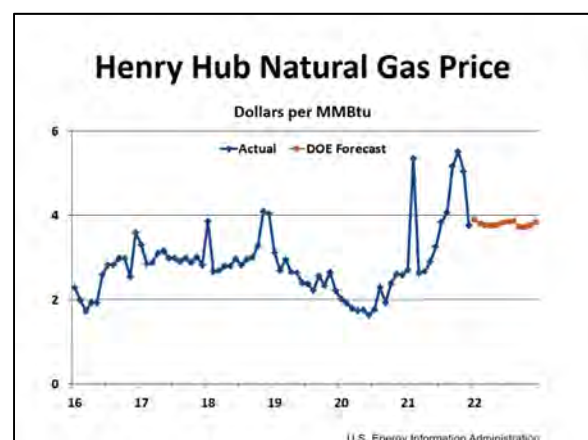


Figure 15 - Henry Hub Natural Gas Price

Natural gas production is expected to average 96.0 billion cubic feet per day (Bcf/d) in 2022, up from 93.5 (Bcf/d) per



day in 2021. EIA estimates that U.S. total natural gas consumption in 2021 averaged 83.0 Bcf/d, almost unchanged from 2020. EIA expects U.S. natural gas consumption to remain at nearly the same level in both 2022 and 2023.

## U.S. Equity Markets

After the large drop in March 2020, the Dow Jones Industrials Average (Dow) has been on a strong recovery to reach 36,386 by the end of 2021 (Figure 16). In the early weeks of 2022, financial markets have experienced some increased volatility. As of February 4, the Dow had dropped slightly to 35,090.

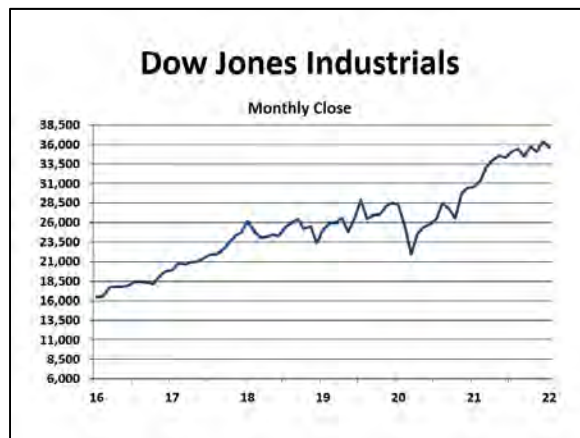


Figure 16 - Dow Jones Industrials

## World Economies

Global economies expanded in 2021 but slower economic activity is expected in 2022 and 2023. According to the latest projections by the International Monetary Fund (IMF), the world economy expanded by 5.9% in 2021, as compared to a decline of 3.1% in 2020 (Figure 17). The IMF projections call for the world economy to grow by 4.4% in 2022 and 3.8% in 2023. IMF reduced 2022 global growth projections for the U.S. based on continued supply shortages, earlier withdrawal of monetary accommodation, and removal of the Build Back Better fiscal policy package from the baseline. China's expected 2022 growth rate was also lowered based on increased

financial stress among property developers and the zero-tolerance COVID policy disruptions.

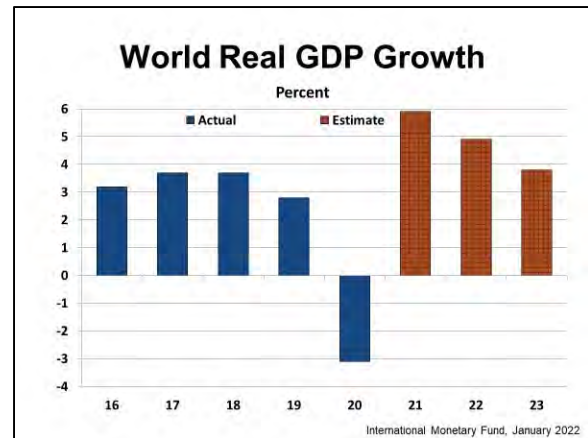


Figure 17 - World Real GDP Growth

The IMF projects that growth in advanced economies will slow from 5.0% in 2021 to 3.9% in 2022 and 2.6% in 2023. Growth rates have been revised downward for most economies. In the U.S., growth is expected to decline from 5.6% in 2021 to 4.0% in 2022 (Table 2).

Table 2 - Selected Economies: Real GDP

	Year-Over-Year % Changes			
	2020	2021	2022f	2023f
World	-3.1	5.9	4.4	3.8
U.S.	-3.4	5.6	4.0	2.6
Euro Area	-6.4	5.2	3.9	2.5
Japan	-4.5	1.6	3.3	1.8
China	2.3	8.1	4.8	5.2
India	-7.3	9.0	9.0	7.1
Russia	-2.7	4.5	2.8	2.1
Brazil	-3.9	4.7	0.3	1.6
Mexico	-8.2	5.3	2.8	2.7

Source: International Monetary Fund, January 2022

According to the IMF, the output of emerging and developing economies (EMDEs) expanded at a rate of 6.5% in 2021 but will slow to 4.8% in 2022 and 4.7% in 2023. The growth rate in emerging and developing Asia in 2021 was 7.2% and is expected to decline to 5.9% in 2022 and 5.8% in 2023.

In Latin America and the Caribbean, growth is expected to slow from 6.8% in 2021 to 2.4% in 2022 and 2.6% in 2023. In the Middle East and Central Asia region, growth is expected to increase slightly from 4.2% in 2021 to 4.3% in 2022, then drop to 3.6% in 2023. In sub-Saharan Africa, growth is expected to slow from 4.0% in 2021 to 3.7% in 2022 and bounce back to 4.0% in 2023.

Risks to the global baseline are tilted to the downside as the emergence of new COVID-19 variants could extend the pandemic and create more economic disruptions. Risks to financial stability capital flows will likely increase as advanced economies lift policy rates.

## Exchange Rates

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

In 2021, the euro averaged 0.85 per dollar, which is higher than the average value in 2020 (Table 3). In early February 2022, the euro stood at 0.90 per dollar. The Brazilian real depreciated against the dollar in 2021. With an average of 5.40 per dollar, the real declined by 4.7% against the dollar in 2021 and declined further to 5.43 per dollar in early February 2022.

**Table 3 - Selected Exchange Rates**

Currency per U.S. Dollar			
	2019	2020	2021
Euro	0.89	0.88	0.85
Japanese Yen	109.03	106.78	109.88
Brazilian Real	3.95	5.16	5.40
South Korean Won	1,166	1,180	1,145
Indian Rupee	72.85	74.12	73.94
Indonesia Rupiah	14,140	14,486	14,296
Pakistani Rupee	150.41	161.70	162.48
Chinese Yuan	6.91	6.90	6.45
Source: WSJ.com			

The Japanese Yen and Pakistan Rupee also showed a depreciation against the dollar in

2021. The Euro, South Korean Won, Indian Rupee, Indonesia Rupiah, and Chinese Yuan all showed an appreciation against the dollar in 2021.

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 to reach 115.8 in December 2021.



**Figure 18 – Trade Weighted U.S. Dollar Index**

## Commodity Prices

The U.S. Department of Agriculture (USDA) publishes monthly indices of prices received by farmers. In 2021, the crop price index trended upward throughout most of the year but declined a bit at the end of the year. In December 2021, the crop price index was 105.9 (Figure 19) as compared to 107.3 in November 2021 and 91.6 in December 2020. The cotton price index reached 99.6 in December 2021, which was 33.5% higher than a year ago.

The livestock price index increased to 120.5 in December 2021. As compared to a year ago, the livestock price index was 32.6% higher. Compared with a year ago, prices of

cattle, calves, hogs, broilers, eggs, and milk are all higher.

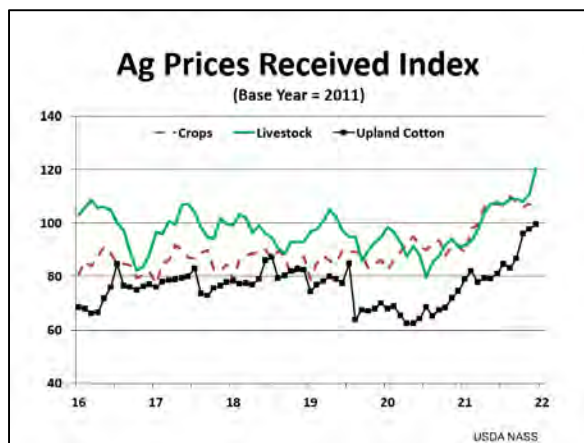


Figure 19 - Ag Prices Received Index

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 2021. In December 2021, the diesel price index was 26.0% higher than a year ago. The nitrogen price index increased throughout 2021 and ended the year 95.0% higher than a year ago (Figure 20).

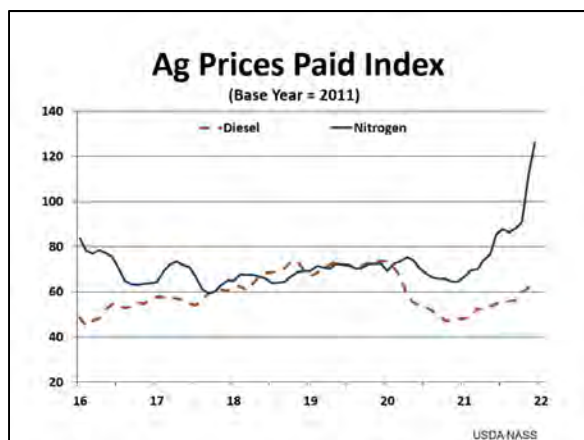


Figure 20 - Ag Prices Paid Index

## U.S. Net Farm Income

The latest USDA Economic Research Service (ERS) estimates place U.S. net farm income at \$119.1 billion in 2021, up 25.1%

from the 2020 estimate of \$95.2 billion (Figure 21). Net cash farm income increased by 14.5%, or \$17.0 billion in 2021. U.S. net cash farm income is projected to increase by 1.4%, or \$1.9 billion in 2022, while net farm income is projected to decline by 4.5% in 2022 to \$113.7 billion. However, in inflation-adjusted dollars, 2022 net cash farm income is projected to decrease by \$2.9 billion, or 2.1%, and 2022 net farm income is projected to decrease by \$9.7 billion, or 7.9%.

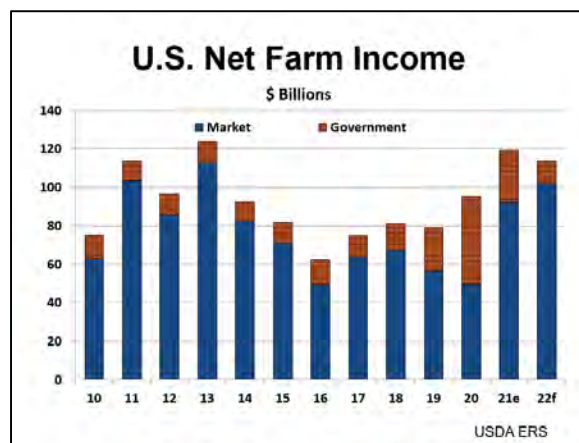


Figure 21 - U.S. Net Farm Income

According to USDA ERS, total commodity receipts are projected to increase in 2022. Crop receipts are expected to increase by \$12.0 billion in 2022 largely driven by an increase of \$4.6 billion in soybean receipts, \$3.4 billion in corn receipts, \$2.5 billion in cotton receipts, and \$1.2 billion in wheat receipts.

Cash receipts for broilers, eggs, and turkeys are expected to increase in 2022 in nominal terms by 12.3%, 3.0%, and 3.0%, respectively. However, 2022 receipts are lower than 2021 when adjusted for inflation. Milk receipts are expected to increase by 22.1% in 2022 due to expectations for strong price growth. Cattle/calves receipts are projected to increase by 8.5% in 2022. Hog cash receipts are projected to decline by 10.3% in 2022 due to lower prices. Total production expenses are forecast to increase



by 5.1% in 2022 largely due to higher feed and fertilizer expenses. This follows a 9.4% increase in nominal production expenses in 2021. If realized, 2022 production expenses would be the highest levels since 2015. After reaching a record high in 2020, government payments declined by 40.7% to \$27.1 billion in 2021 and are expected to decline by another 57.0% in 2022 to \$11.7 billion.

Farm financial risk indicators such as the debt-to-asset and debt-to-equity ratios are expected to rise in 2022, indicating increasing financial pressure on the sector. However, debt-to-asset and debt-to-equity ratios remain low relative to historical levels.

Farm sector assets are projected to increase due to a modest increase in the value of farm real estate. However, when adjusted for inflation, both total assets and farm real estate assets are projected to decline by 2.2% and 2.5%, respectively. Farm sector debt is expected to increase by 2.9% in 2022 in nominal terms and fall by 0.7% when adjusted for inflation. Farm sector equity is expected to increase by 1.0% in 2022 in nominal terms and fall by 2.5% when adjusted for inflation. The debt-to-asset level in 2021 was 13.9% and is projected to increase to 14.1% in 2022.

## U.S. Farm and Trade Policy

Agricultural policy provisions applying to the 2022 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 2020 loan rate is based on the 2017 and 2018 marketing years since those are the 2 most recent years as of October 1, 2019. 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](http://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](http://www.cotton.org) and the USDA-RMA website [www.rma.usda.gov](http://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 emphasized the convergence of trade policy, environment, and climate change issues. Unfortunately, logistic issues have become an even more pressing concern. From container shortages to detrimental actions of ocean container carriers and marine terminal operators, logistics issues continue to be of utmost concern for the U.S. cotton industry. Furthermore, countervailing duties were placed on Russian and Moroccan imports of phosphate fertilizer by the U.S. International Trade Commission (ITC).

### ***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% 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 will no longer permit 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 will thus provide 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% 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% tariffs on roughly 900 items dropped to 5% and the 5% 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 January through November 2021 time period, U.S. exports of agricultural products to China were approximately \$30.0 billion while U.S. exports of raw cotton fiber to China during the same time period were approximately \$1.2 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. Over the course of the past year, 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 2<sup>nd</sup> 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 was signed into law by President Biden on December 23, 2021. 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.

### ***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 3<sup>rd</sup>-country participation, including 'cumulation', Tariff Preference Levels (TPLs) which authorize the use of a specified quantity of 3<sup>rd</sup> 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 recent months, there has been efforts by some to weaken the yarn-forward rule of origin in CAFTA. In January 2022, 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.

### ***Turkey Antidumping Duties***

Turkey's antidumping (AD) investigation of imports of U.S. cotton came to a conclusion in 2016. The investigation was self-initiated by Turkey's Ministry of Economy (MoE) in October 2014.

On April 16, 2016, the Turkish government released its final decision on its anti-dumping investigation of U.S. cotton. Based on assertions that U.S. cotton was dumped into Turkey injuring the domestic market, a 3.0% CIF (cost, insurance, and freight) duty was imposed on all U.S. cotton fiber imports into Turkey, effective immediately at the time of the final decision.

The duties put U.S. cotton at a competitive disadvantage to cotton produced in other countries, thus jeopardizing business with Turkish mills.

On April 16, 2021, the Government of Turkey removed the 3.0% duty on U.S. cotton.

### **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. The 12<sup>th</sup> Ministerial Conference was scheduled for June 8-11, 2020 in Astana Kazakhstan. However, due to the COVID-19 global pandemic, the Ministerial Conference was cancelled and rescheduled for November 26 – December 3, 2021. Due to an outbreak of the COVID-19 Omicron variant the Ministerial was postponed for the second time. As of the writing of this publication, the next Ministerial Conference has not been scheduled.

During the WTO 10<sup>th</sup> Ministerial Conference, the decision was made to continue cotton dedicated discussions within the WTO for purposes of providing greater transparency and complete notifications of subsidies by all countries. These dedicated discussions are to be held twice each year. The latest cotton dedicated discussion was held in November 2021. During that session, members emphasized the importance of cotton in assisting least-developed countries in recovering from the COVID-19 pandemic and furthering economic development.

After the terms of two of its judges expired in December 2019, and in light of the continuing blockage of new appointments by the U.S., the WTO Appellate Body is unable to hear appeals of cases decided by the WTO Dispute Settlement Body panels. The term of the last sitting Appellate Body member expired on November 30, 2020.

In addition to blocking new appointments to the Appellate Body, the U.S. also blocked the appointment of a new Director General in late 2020. However, a new Director General, Ngozi Okonjo-Iweala, took office on March 1, 2021.

The WTO blockings were done in an attempt to prompt consideration of ways to reform the WTO, specifically the dispute settlement system. U.S. concerns and criticisms over the dispute settlement process began during the Obama Administration. The Trump Administration put the concerns into effect by blocking the Appellate Body appointments. The Trump Administration did not put forth information on what the U.S. expected WTO reform to look like. While USTR Ambassador Tai has affirmed the Biden Administration's commitment to the WTO, so far, the Biden Administration has not removed their opposition to the Appellate Body.

### **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 36 countries that are eligible for economic and trade benefits under AGOA. Of those 36 Sub-Saharan countries, 24 of them are eligible to receive AGOA's apparel benefits. Twenty-three countries also qualify for the Less Developed Country (LDC) special rule for apparel (third-country fabric). Sixteen countries also qualify for AGOA's provisions for hand-loomed and handmade articles. Five 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](http://www.cotton.org).

# U.S. Supply

## 2021 Planted Acreage

U.S. farmers planted 11.1 million acres of upland cotton in 2021, a decrease of 6.7% from the previous year (Figure 22).

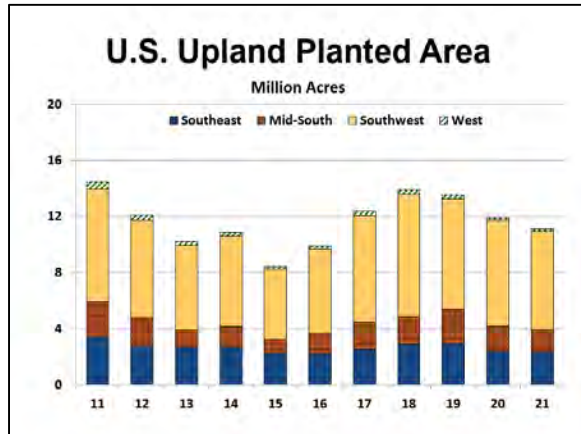


Figure 22 - U.S. Upland Planted Area

In the Southeast, 2021 cotton acreage decreased by 42 thousand acres, or 1.8% (Figure 23). Alabama, Florida, Georgia, and Virginia decreased cotton acreage by 10.0%, 7.1%, 1.7%, and 6.3%, respectively. North Carolina and South Carolina increased cotton acreage by 4.2% and 10.5%, respectively. State totals for the region are: Alabama – 405 thousand acres, Florida – 91 thousand acres, Georgia – 1.2 million acres, North Carolina – 375 thousand acres, South Carolina – 210 thousand acres, and Virginia – 75 thousand acres.

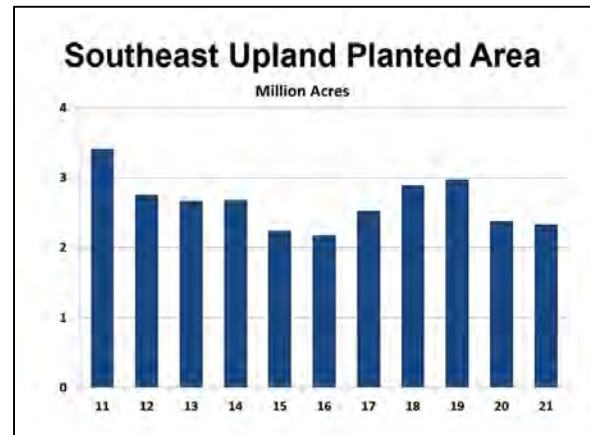


Figure 23 - Southeast Upland Planted Area

In 2021, plantings of 1.6 million acres in the Mid-South represented a 9.4% decrease (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 decreased in all Mid-South states in 2021 except for Missouri. For Arkansas, Louisiana, Mississippi, and Tennessee, acreage decreased by 8.6%, 35.3%, 15.1%, and 1.8%, respectively. Missouri acreage increased by 6.8% in 2021. State totals for the region are: Arkansas – 480 thousand acres, Louisiana – 110 thousand acres, Mississippi – 450 thousand acres, Missouri – 315 thousand acres, and Tennessee – 275 thousand acres.

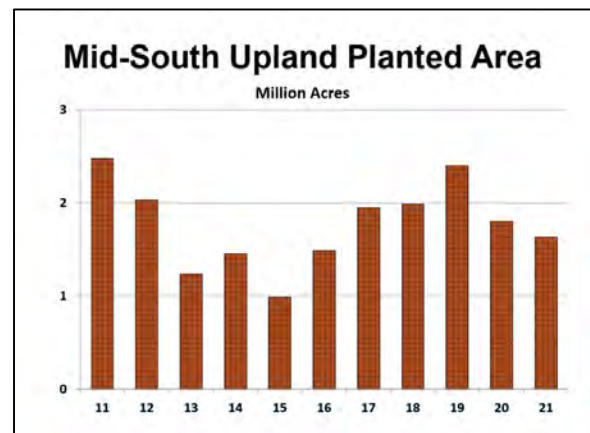


Figure 24 - Mid-South Upland Planted Area

In the Southwest, 2021 upland cotton area decreased by 7.5% to 7.0 million acres (Figure 25). With an 5.7% decrease, Oklahoma's cotton area declined from 525 thousand acres to 495 thousand acres. Kansas area decreased by 43.6%, bringing the 2021 total to 110 thousand acres. In Texas, producers planted 6.4 million acres, a 6.6% decline from 2020.

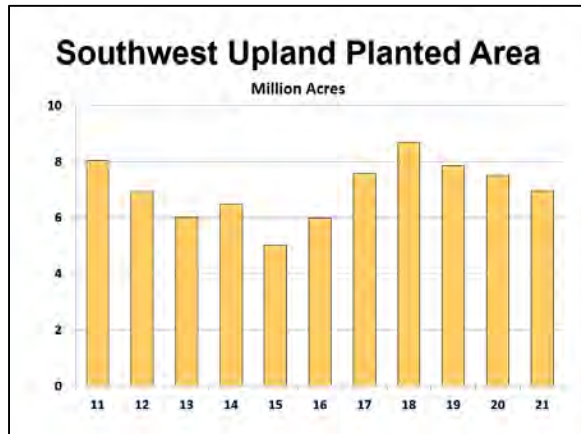


Figure 25 - Southwest Upland Planted Area

Upland acres in the West stood at 182 thousand acres in 2021, down 9.9% from 2020 (Figure 26). Acreage decreased by 23.5% in California, 16.3% in New Mexico, and 4.0% in Arizona.

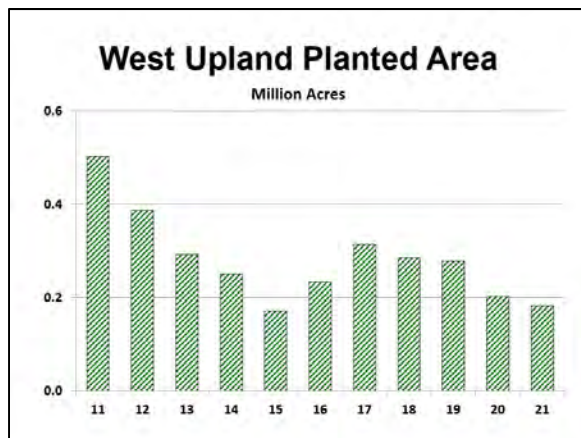


Figure 26 - West Upland Planted Area

In 2021, overall ELS acreage decreased by 37.4%, with planted area at 127 thousand acres (Figure 27). California acreage declined by 40.1% and Texas acreage

declined by 55.3%. Arizona and New Mexico acreage increased by 38.5% and 19.0%, respectively.



Figure 27 - U.S. ELS Planted Area

## 2021 Harvested Acreage

Overall U.S. abandonment was 11.2%, down 20.4 percentage points from 2020 (Figure 28). In Texas, 17.3% of upland acres were unharvested, which was well below the 5-year average of 31.7%. In Oklahoma, 12.1% of acres were unharvested, which was lower than the 5-year average of 19.7%.

In the Southeast, abandonment levels were lower as compared to 2020. In Alabama, 1.2% of acres were abandoned as compared to the 5-year average of 1.4%. In Georgia, 0.9% of acres were abandoned as compared to the 5-year average of 2.8%. In Florida, the abandonment rate was 2.2% as compared to the 5-year average of 6.2%. In North Carolina, 2021 abandonment of 2.7% was lower than the 5-year average of 4.5%. In South Carolina, abandonment was 2.4% as compared to the 5-year average of 4.1%. In Virginia, 2021 abandonment was 1.3% as compared to the 5-year average of 1.1%.

In the Mid-South, the 2021 abandonment rate was slightly higher than the 5-year average in Louisiana, Mississippi, and Tennessee and lower than the 5-year average in Arkansas and Missouri. The abandonment rate for Arkansas, Louisiana, Mississippi,

Missouri, and Tennessee, was 1.0%, 4.6%, 3.3%, 1.6%, and 1.8%, respectively. The 2021 abandonment rate for upland cotton in the West was also lower than the 5-year average. For ELS cotton, 2021 abandonment was 2.1%, unchanged from the 5-year average.

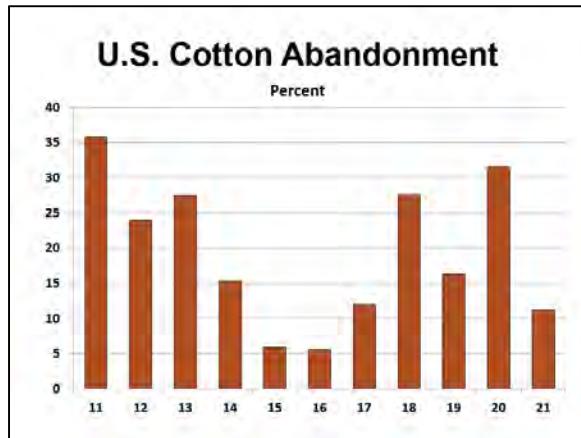


Figure 28 - U.S. Cotton Abandonment

## 2021 Yields

In 2021, the estimated national average cotton yield of 849 pounds was slightly higher than the previous year and 15 pounds lower 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 and Mid-South regions had above average yields in 2021 while the Southwest and West regions had below average yields in 2021.

In the Southeast, the 2021 yield for all states was higher than in 2020.

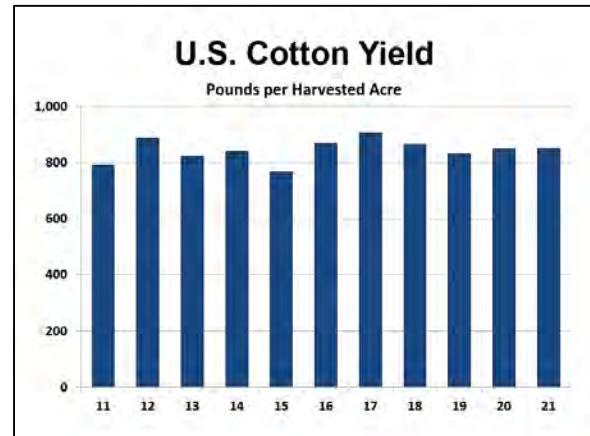


Figure 29 - U.S. Cotton Yield

The 2021 Southeast yield of 933 pounds was 108 pounds higher than 2020 and 77 pounds above the 5-year average (Figure 30). In Alabama, the 2021 yield of 846 was 56 pounds higher than 2020 and 43 pounds lower than the 5-year average. In Florida, the 2021 yield of 674 pounds was 143 pounds higher than in 2020 and 63 pounds below the 5-year average.

The 2021 Georgia yield of 931 pounds was 44 pounds higher than 2020 and 72 pounds higher than the 5-year average. The 2021 North Carolina yield of 999 pounds was 240 pounds higher than 2020 and 139 pounds higher than the 5-year average. In South Carolina, the record 2021 yield of 995 pounds was 193 pounds higher than 2020 and 207 pounds higher than the 5-year average. At 1,232 pounds, the 2021 Virginia yield was the 2<sup>nd</sup> highest yield on record. The 2021 Virginia yield was 461 pounds higher than 2020 and 298 pounds higher than the 5-year average.

Southeast Upland Yields Pounds per Harvested Acre			
	2020	2021	5-Year Average
Alabama	790	846	889
Florida	532	674	737
Georgia	887	931	859
North Carolina	759	999	861
South Carolina	802	995	788
Virginia	772	1,232	935
SOUTHEAST	825	933	856

Figure 30 - Southeast Upland Yields

Overall, cotton acreage in the Mid-South produced yields above the 5-year average in 2021 (Figure 31). The 2021 Mid-South yield of 1,148 pounds was 40 pounds higher than 2020 and 31 pounds above the 5-year average. In Arkansas, the 2021 yield of 1,263 pounds was a record yield and was 84 pounds higher than in 2020. The 2021 Louisiana yield of 960 pounds was 26 pounds lower than in 2020 and 30 pounds below the 5-year average. In Mississippi, the 2021 yield of 1,015 pounds was 64 pounds lower than the previous year and 95 pounds lower than the 5-year average. In Missouri, the 2021 yield of 1,293 pounds was 149 pounds higher than 2020 and 97 pounds higher than the 5-year average. The 2021 Tennessee yield of 1,067 pounds was roughly the same as 2020 and 11 pounds below the 5-year average.

Mid-South Upland Yields Pounds per Harvested Acre			
	2020	2021	5-Year Average
Arkansas	1,179	1,263	1,155
Louisiana	986	960	990
Mississippi	1,079	1,015	1,110
Missouri	1,144	1,293	1,196
Tennessee	1,066	1,067	1,078
MID-SOUTH	1,108	1,148	1,118

Figure 31 - Mid-South Upland Yields

In the Southwest, the 2021 average yield of 706 pounds was 14 pounds higher than 2020 and 23 pounds below the 5-year average. In Texas, the yield of 695 pounds was 9 pounds higher than 2020 and 25 pounds lower than the 5-year average. The Oklahoma yield of 783 pounds was 82 pounds higher than in 2020 and 23 pounds above the 5-year average. At 950 pounds, the Kansas yield was 168 pounds higher than the previous year and 9 pounds above the 5-year average (Figure 32).

Southwest Upland Yields Pounds per Harvested Acre			
	2020	2021	5-Year Average
Kansas	783	950	942
Oklahoma	702	783	761
Texas	686	695	720
SOUTHWEST	692	706	729

Figure 32 - Southwest Upland Yields

The average upland yield in the West was estimated at 1,343 pounds, which was 30 pounds higher than 2020 and 7 pounds below the 5-year average (Figure 33). The Arizona yield of 1,291 pounds was 112 pounds higher than 2020 and 34 pounds below the 5-year average. The New Mexico



yield of 868 pounds was 185 pounds lower than 2020 and 144 pounds below the 5-year average. The record California yield of 2,071 pounds was 65 pounds higher than 2020 and 404 pounds higher than the 5-year average.

<b>West Upland Yields</b> Pounds per Harvested Acre			
	2020	2021	5-Year Average
Arizona	1,179	1,291	1,325
California	2,006	2,071	1,667
New Mexico	1,052	868	1,012
WEST	1,312	1,343	1,350

**Figure 33 - West Upland Yields**

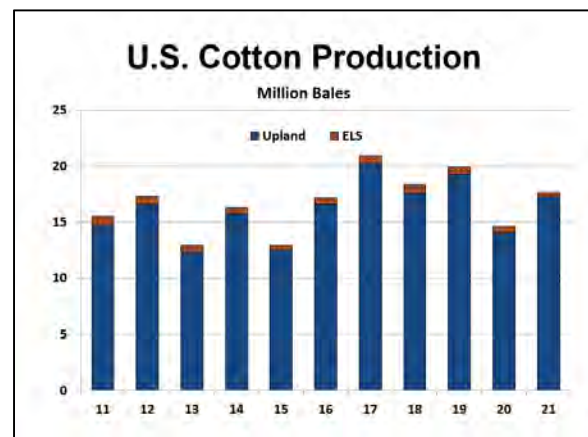
The national average ELS yield of 1,423 pounds was 71 pounds above 2020 and 12 pounds below the 5-year average (Figure 34). Accounting for the majority of ELS acres, California heavily influences the U.S. average and had a record yield of 1,694 pounds in 2021. The 2021 California yield was 132 pounds higher than the previous year and 149 pounds above the 5-year average. At 1,091 pounds, ELS yields in Arizona were 57 pounds higher than 2020 and 169 pounds above the 5-year average. New Mexico's 2021 yield of 600 pounds was the lowest yield since 2000. The 2021 New Mexico yield was 63 pounds lower than 2020 and 205 pounds below the 5-year average. The 2021 Texas ELS yield of 750 pounds was 84 pounds higher than 2020 and 99 pounds below the 5-year average.

<b>ELS Yields</b> Pounds per Harvested Acre			
	2020	2021	5-Year Average
Arizona	1,034	1,091	922
California	1,562	1,694	1,545
New Mexico	663	600	805
Texas	666	750	849
U.S.	1,352	1,423	1,435

**Figure 34 - ELS Yields**

## 2021 Production

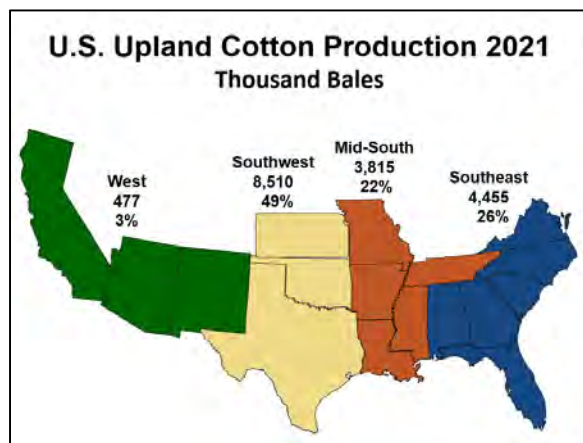
The January 2022 USDA estimate places the 2021 U.S. cotton crop at 17.6 million bales (Figure 35), up 3.0 million bales from 2020. The 2021 crop represents a 572 thousand bale decline relative to the 5-year average. Upland production was estimated at 17.3 million bales, and ELS growers harvested 367 thousand bales.



**Figure 35 - U.S. Cotton Production**

In 2021, the Southeast produced 4.5 million bales, accounting for 25.8% of the total upland crop (Figure 36). The region's 2021 crop was down by 490 thousand bales from the 2020 total and 12 thousand bales below the 5-year average. For 2021, Alabama production of 705 thousand bales was 29 thousand bales lower than 2020 and 128 thousand bales below the 5-year average. In Florida, 2021 production of 125,000 bales

was 22 thousand bales higher than 2020 and 27 thousand bales below the 5-year average. For Georgia, 2021 production of 2.3 million bales was 70 thousand bales higher than 2020 and 6 thousand bales below the 5-year average. The 2021 North Carolina production of 760 thousand bales was 238 thousand bales higher than 2020 and 90 thousand bales above the 5-year average. The 2021 South Carolina production of 425 thousand bales was 126 thousand bales higher than 2020 and 38 thousand bales above the 5-year average. In Virginia, 2021 production of 190 thousand bales was 63 thousand bales higher than 2020 and 21 thousand bales above the 5-year average.



**Figure 36 - U.S. Upland Cotton Production**

For 2021, the Mid-South accounted for 22.1% of the total U.S. upland crop with 3.8 million bales. The Mid-South crop was 276 thousand bales lower than 2020 and 589 thousand bales below the 5-year average. For Arkansas, 2021 production of 1.3 million bales was 27 thousand bales lower than 2020 and 84 thousand bales higher than the 5-year average. For Louisiana, 2021 production of 210 thousand bales was 129 thousand bales lower than 2020 and 193 thousand bales below the 5-year average. The 2021 Mississippi production of 920 thousand bales was 260 thousand bales lower than 2020 and 419 thousand bales below the 5-year average. The 2021 Missouri production of 835 thousand bales

was 151 thousand bales higher than 2020 and 68 thousand bales above the 5-year average. In Tennessee, the 2021 production of 600 thousand bales was 11 thousand bales lower than in 2020 and 130 thousand bales below the 5-year average.

At 8.5 million bales, production in the Southwest accounted for 49.3% of the U.S. upland crop. The 3.0 million bale increase from 2020 resulted from more harvested area across the region. Texas production of 7.6 million bales was 3.0 million bales higher than 2020 and 578 thousand bales higher than the 5-year average. In Oklahoma, 2021 production of 710 thousand was 74 thousand bales higher than the previous year and 13 thousand bales below the 5-year average. Kansas production of 200 thousand bales in 2021 was 100 thousand bales below 2020 and 38 thousand bales below the 5-year average.

The West produced 477 thousand bales of upland cotton in 2021, down 22 thousand bales from the region's 2020 crop and 205 thousand bales below the 5-year average. The region accounted for 2.8% of U.S. production.

The 2021 ELS crop of 367 thousand bales was 180 thousand bales lower than 2020, and 293 thousand bales lower than the 5-year average. The 2021 ELS acreage was at the lowest level in 27 years due to drought and water availability issues. At 307 thousand bales, the California ELS crop was 168 thousand bales lower than 2020 and 289 thousand bales below the 5-year average due to decreased acreage (Figure 37). The state accounted for 83.7% of the total 2021 U.S. ELS crop. Arizona's ELS crop increased slightly to 20 thousand bales, while the Texas crop declined to 25 thousand bales. New Mexico's production of 15 thousand bales was the same as in 2020.

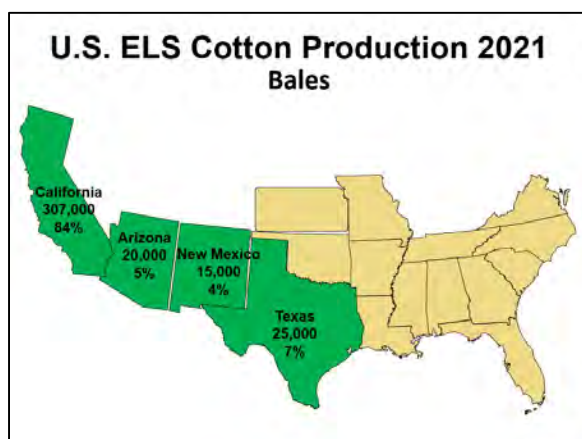


Figure 37 - U.S. ELS Cotton Production

## 2021 Stock Levels

The carryout from the 2020 marketing year, and equivalent carry-in or beginning stocks for the 2021 marketing year, was 3.2 million bales (Figure 38). That represented a decrease of 4.1 million bales from the stocks that were brought into the 2020 marketing year. Upland stocks totaled 3.0 million bales and ELS stocks stood at 130 thousand bales.

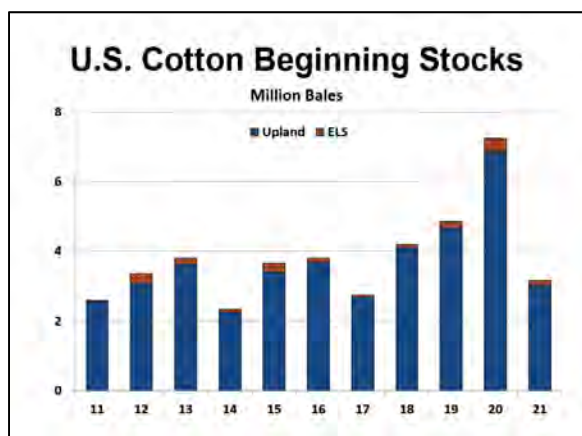


Figure 38 - U.S. Cotton Beginning Stocks

Strong demand and higher cotton prices are expected to lead to a decrease in total CCC loan stocks. Fewer bales will likely be placed under the loan over the next few months as ginning nears completion.

As of January 31, 2022, outstanding upland CCC loan stocks were 4.1 million bales (Figure 39), down from 4.9 million bales on January 31, 2021. As of the end of January,

the Mid-South accounts for 42.4% of cotton placed under loan, the Southwest accounts for 27.5%, the Southeast accounts for 27.7%, and the remaining 2.4% in the West.

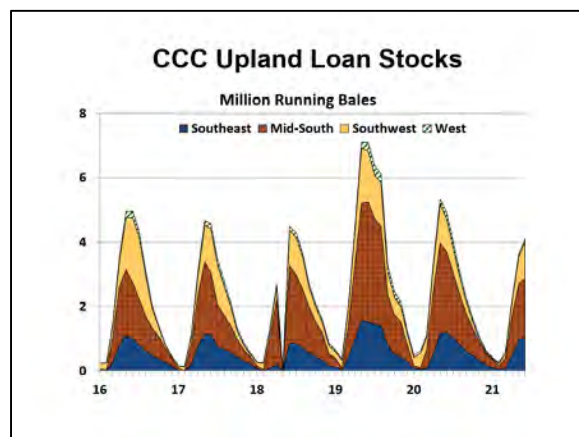


Figure 39 - CCC Upland Loan Stocks

## 2021 Total Supply

Total supply for the 2021 marketing year was estimated to be 20.8 million bales, down slightly from 21.9 million bales the previous year (Figure 40). The reduced supplies are due to lower beginning stocks offsetting the higher production. Total supplies for the 2021 marketing year are 2.0 million bales below the 5-year average.

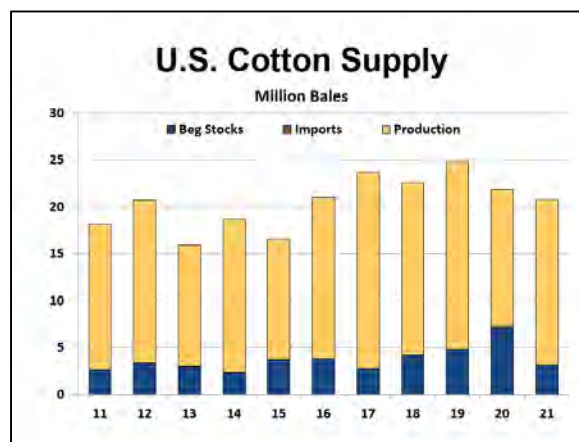


Figure 40- U.S. Cotton Supply

## 2021 Upland Cotton Quality

With 16.2 million 480-pound upland bales classed through January 27, the national average staple length (measured in thirty-second's of an inch) was 36.7, up from a 5-

year average of 36.5 (Figure 41). The Southeast staple length of 36.7 was 0.2 thirty-seconds of an inch better than the 5-year average. In the Mid-South, the average staple length of 37.8 exceeds the 5-year average by 0.4 thirty-second's of an inch. The Southwest's average staple length of 36.1 was slightly higher than the 5-year average of 36.0. The West reports an average staple length of 37.5, up 0.1 from the 5-year average.

<b>2021 Crop Staple and Strength</b>				
	<u>Staple</u>		<u>Strength</u>	
	2021	5-Year	2021	5-Year
Southeast	36.7	36.5	30.2	29.8
Mid-South	37.8	37.4	31.1	30.8
Southwest	36.1	36.0	30.6	30.1
West	37.5	37.4	32.3	31.8
U.S.	36.7	36.5	30.7	30.2

**Figure 41 - Crop Staple and Strength**

The average strength of the 2021 upland cotton crop was 30.7 grams per tex (gpt). The highest strength occurred in the West, with an average of 32.3 gpt, above the 5-year average of 31.8. At 30.2 gpt, the Southeast was higher than the 5-year average of 29.8 gpt. The Southwest crop has an average strength of 30.6 gpt, which was higher than the 5-year average of 30.1. In the Mid-South, an average strength of 31.1 gpt was above the 5-year average of 30.8 gpt.

Color grades for the 2021 crop were much higher than previous years. In total for the Cotton Belt, 93.9% of the 2021 crop was grading 41 or better as compared to the 5-year average of 83.1% (Figure 42). In the Southeast, 92.0% of the 2021 crop was grading 41 or better as compared to the 5-year average of 85.0%. At 98.3%, the Mid-South was higher than their 5-year average of 89.1%. In the Southwest, 92.5% of the

2021 crop was grading 41 or better as compared to the 5-year average of 78.5%. In the West, 95.9% of the 2021 crop was grading 41 or better as compared to the 5-year average of 92.3.

<b>2021 Crop Color and Mike</b>				
	<u>%SLM+</u>		<u>Micronaire</u>	
	2021	5-Year	2021	5-Year
Southeast	92.0	85.0	4.3	4.5
Mid-South	98.3	89.1	4.4	4.6
Southwest	92.5	78.5	4.0	4.2
West	95.9	92.3	4.3	4.4
U.S.	93.9	83.1	4.2	4.3

**Figure 42 - Crop Color and Mike**

The average micronaire of the 2021 upland cotton crop was 4.2, which was below the 5-year average of 4.3. In the Southeast, the average micronaire was 4.3, below their 5-year average of 4.5. In the West, the average micronaire was 4.3, below their 5-year average of 4.4. In the Mid-South, the average micronaire was 4.4, below their 5-year average of 4.6. In the Southwest, the average micronaire was 4.0, below the 5-year average of 4.2.

## **Cottonseed Situation**

### ***Cottonseed Supply***

The USDA estimate for 2021 cottonseed production was 5.4 million tons, up 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 1.27 and 1.31, are down over the past 15 years from a range of 1.55 to 1.60. For the 2021 marketing year, the estimated seed-to-lint ratio was 1.27.



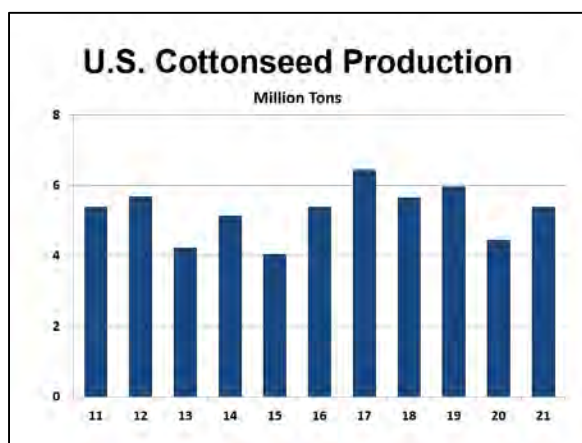


Figure 43 - U.S. Cottonseed Production

For the 2021 crop, a regional breakdown of production shows that the Southwest produced 2.6 million tons or 48.5% of the total, the largest of any region (Figure 44). They were followed by the Southeast with production of 1.3 million tons for a 23.7% share. The Mid-South produced 1.2 million tons for a 22.5% share and the West accounted for 286 thousand tons, 5.3% of the total.

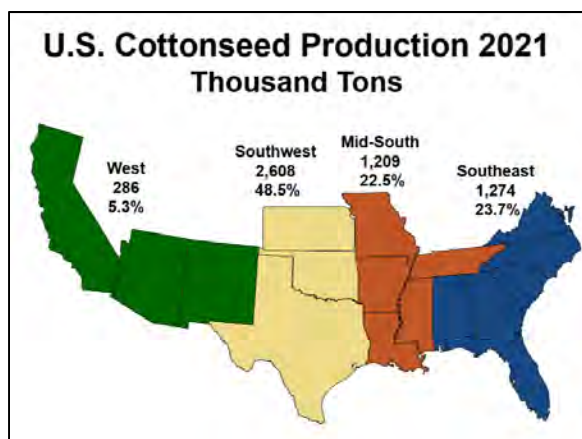


Figure 44 - U.S. Cottonseed Production

Supplementing U.S. production, beginning stocks of 359 thousand tons bring total cottonseed supplies for the 2021 marketing year to 6.0 million tons (Figure 45). Total supplies for 2021 were up by 1.0 million tons from the previous year. The 2021 total supply was 56 thousand bales lower than the 5-year average.

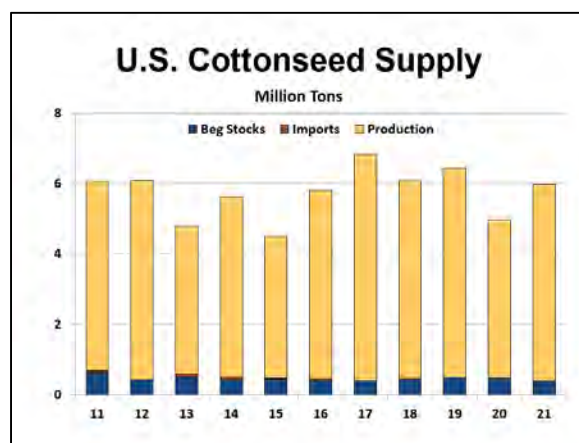


Figure 45 - U.S. Cottonseed Supply

### Disappearance and Stock Levels

The January 2022 USDA estimate for cottonseed disappearance showed a crush level of 1.7 million tons for the 2021 marketing year (Figure 46). With larger supplies in 2021, whole seed feeding was estimated at 3.6 million tons as compared to 2.8 million tons in 2020.

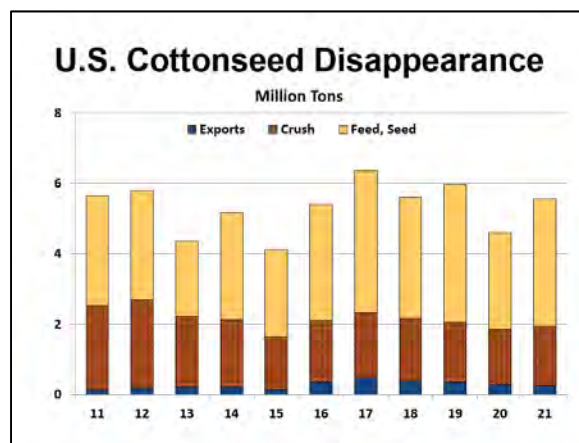


Figure 46 - U.S. Cottonseed Disappearance

For 2021, cottonseed stocks are expected to be 418 thousand tons as compared to 359 thousand tons in 2020 (Figure 47).

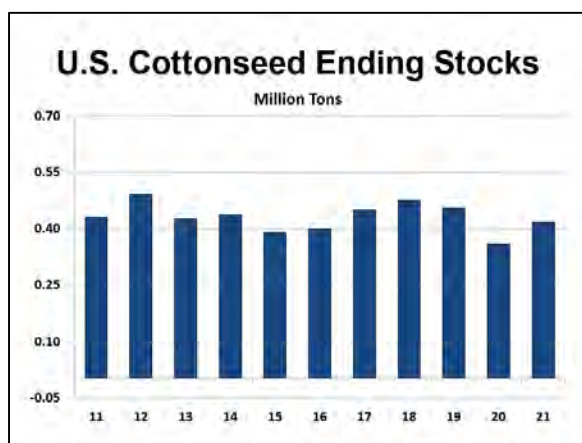


Figure 47 - U.S. Cottonseed Ending Stocks

## 2021 Cotton Prices

### Upland Cotton Prices

Cotton futures prices traded much higher in 2021 as compared to 2020. During the first half of 2021, cotton futures prices traded in the 80 to 90 cent range. Prices steadily increased throughout the remainder of the year. The nearby NY futures contract reached 112.6 cents by the end of year (Figure 48). In early February, the nearby NY futures contract was trading at 127.6 cents per pound. 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.

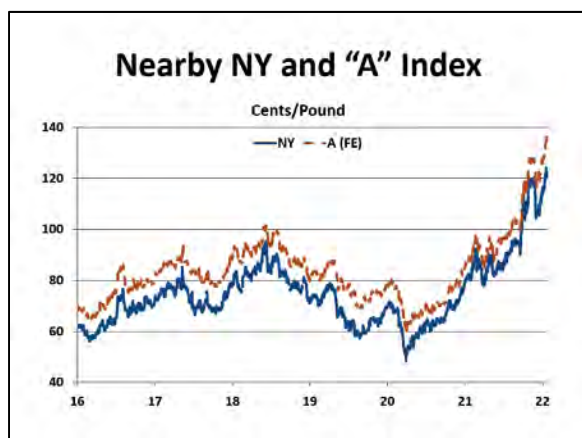


Figure 48 - Nearby NY and "A" (FE) Index

Over the last few weeks, prices have been trading between 117 and 124 cents/lb., with the "A" Index close to 136 cents/lb.

Thus far in the current marketing year (Aug-early Feb), the nearby NY futures contract has averaged 106.9 cents per pound. During the 2020 marketing year, the average futures price was 78.0 cents per pound.

Spot prices in the U.S. followed a similar pattern to the futures market and the "A" Index. For the 2021 marketing year, spot prices averaged 102.8 cents/lb. from August to January. The average spot price in January 2021 was 115.2 cents per pound (Figure 49). The average spot 4134 value for the 2020 crop cotton was 73.8 cents per pound.



Figure 49 - Spot 4134 Price

### ELS Cotton Prices

ELS cotton prices began 2021 at \$1.14 per pound and ended the year at \$3.00 per pound (Figure 50). Strong demand and lower supplies have supported prices during the 2021 crop year.



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 2021, cottonseed prices traded higher than in 2020. The national average cottonseed spot price was \$315 per ton in January 2022 as compared to \$267 per ton in January 2021.

On a regional basis, the average January 2022 spot price was \$258 per ton in the Southeast, \$304 per ton in the Mid-South, \$337 per ton in the Southwest, and \$428 per ton in the West.

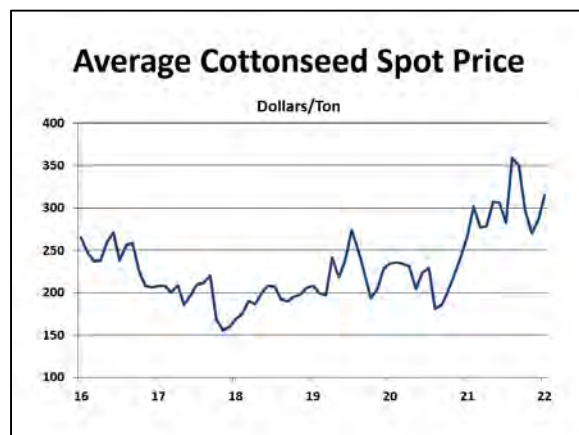


Figure 51 - Average Cottonseed Spot Price

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.

## 2022 Planting Intentions

In consideration of their 2022 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 2022 planting season, cotton harvest-time futures contracts are currently trading at higher levels than last year. During the 2022 survey period, the average December 2022 NY futures price for cotton was \$0.93 per pound (Figure 52). In early February 2022, futures prices had increased to \$1.04 per pound as compared to \$0.81 per pound a year ago.

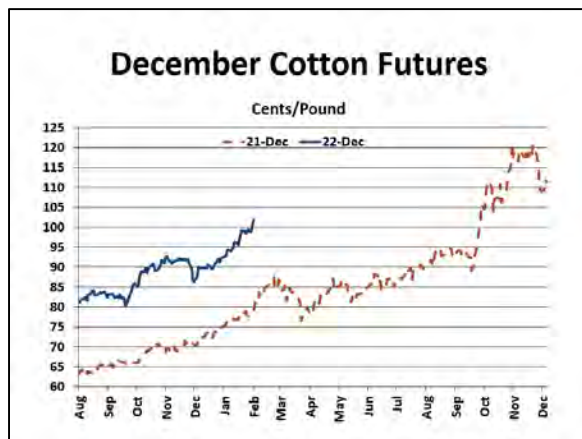


Figure 52 - December Cotton Futures

Corn prices increased during the first half of 2021 before trading in a more volatile sideways pattern during the second half of year. During the 2022 survey period, the average December 2022 NY futures price for corn was \$5.51 per bushel (Figure 53). Prices increased to \$5.78 per bushel in early February 2022 as compared to \$4.48 per bushel a year ago.

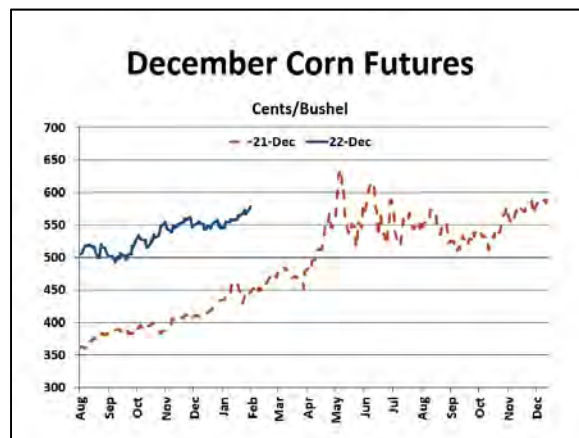


Figure 53 - December Corn Futures

Soybean prices, as measured by the Chicago Board of Trade November futures contract, increased during the first half of 2021, and trended downward during the second half. During the 2022 survey period, the average November 2022 NY futures price for soybeans was \$12.76 (Figure 54). In early February 2022, prices increased to \$13.86 per bushel as compared to \$11.56 per bushel a year ago.

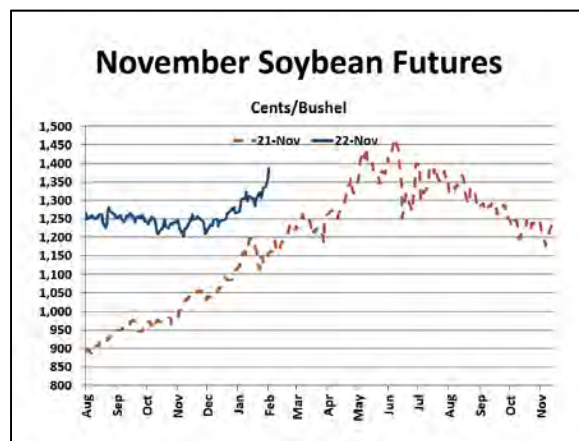


Figure 54 - November Soybean Futures

Relative to the average futures prices in the first quarter of 2021, cotton prices during the 2022 survey period were up by 14.4%, corn prices were trading about 19.9% higher, and soybean prices were trading 7.2% higher. In 2021, the January-March average futures prices for cotton, corn, and soybeans were



\$0.81 per pound, \$4.60 per bushel, and \$11.91 per bushel, respectively. During the 2022 survey period, average futures prices for cotton, corn, and soybeans were \$0.93 per pound, \$5.51 per bushel, and \$12.76 per bushel.

### **2022 U.S. Cotton Acreage Intentions**

In mid-December 2021, 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 2021 and intended acreage for 2022. 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 2022 survey period was December 14, 2021 – January 17, 2022. As compared to the average prices in the first quarter of 2021, the cotton-to-corn price ratio during the 2022 survey period was lower (2021-17.6, 2022-17.3) and the cotton-to-soybean price ratio was higher (2021-6.8, 2022-7.3).

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 3.7% increase in the region’s upland area to 2.4 million acres (See Table 4 on page 47). Cotton acreage is expected to increase in Alabama, Georgia, North Carolina, South Carolina, and Virginia. In Alabama, the survey responses indicate a 5.0% increase in

cotton acreage. Alabama growers intend to plant less corn and ‘other crops’ and more soybeans and wheat. In Florida, respondents indicated slightly less acreage of cotton, corn and ‘other crops’, and more soybeans. In Georgia, cotton acreage is expected to increase by 1.3% to 1.2 million acres. Georgia growers expect to plant less corn and wheat and more soybeans, and ‘other crops’, likely peanuts. In North Carolina, an 8.0% increase in cotton acreage is expected. Acreage of corn, soybeans, and wheat is expected to decline while acreage of ‘other crops’ is expected to increase. In South Carolina, acreage is expected to increase by 10.0%. South Carolina growers expect to plant less corn and more soybeans and ‘other crops’. Cotton acreage is expected to increase by 4.7% in Virginia. Virginia growers intend to plant less corn, slightly less soybeans and wheat, and more ‘other crops’.

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 1.9 million acres, an increase of 14.6% from the previous year.

Across the Mid-South region, all states intend to increase cotton acreage. In Arkansas, acreage is expected to increase by 15.7% to 555 thousand acres in 2022. Arkansas growers expect to plant less corn and ‘other crops’, and more soybeans and wheat. Louisiana growers expect to plant 166 thousand acres, which is 51.2% higher than last year. Louisiana growers expect to plant less corn, wheat, and ‘other crops’, and more soybeans. In Mississippi, respondents expect to plant 479 thousand acres, which is 6.5% higher than last year. Mississippi respondents expect to plant less corn, wheat, and ‘other crops’ and more soybeans. Missouri growers expect to increase cotton

acres by 5.9% to 334 thousand acres. Missouri growers expect to plant less corn and ‘other crops’ and more soybeans and wheat. In Tennessee, cotton acreage is expected to increase by 21.1% to 333 thousand acres. Tennessee growers expect plant less corn, and more soybeans and wheat.

Growers in the Southwest intend to plant 7.4 million acres of cotton, an increase of 7.0%. Increased cotton area is expected in all states in the region. In Kansas, producers intend to plant 15.2% more cotton acres in 2022. Kansas growers intend to plant more corn, wheat, and soybeans, and less ‘other crops’, likely sorghum. In Oklahoma, a 5.6% increase in cotton acreage is expected. Oklahoma producers expect to plant more wheat and less soybeans and ‘other crops’. Overall, Texas acreage is expected to increase by 6.9%.

In south Texas, respondents indicate a 4.6% increase in cotton acreage. South Texas growers intend to plant more corn, wheat, and soybeans and less sorghum. Respondents from the Blacklands indicate an increase of 32.3% in cotton acreage, and a decrease in corn, wheat, and sorghum. In West Texas, respondents indicated a 5.9% increase in cotton. West Texas growers expect to plant less wheat and sorghum and slightly more corn.

With intentions of 156 thousand acres, producers in the West expect to plant 14.1% less acres of upland cotton. Drought conditions and water availability issues continue to impact growers in the West. Cotton acreage is expected to decrease in Arizona and California and increase slightly in New Mexico. The survey results for Arizona suggest a 22.7% decrease in upland cotton acres, less corn and ‘other crops’, and more wheat. In California, growers intend to plant 7.7% less upland cotton and less corn, wheat, and ‘other crops’. In New Mexico,

cotton acreage is expected to increase by 10.0% in 2022. New Mexico growers intend to plant less corn, wheat, and ‘other crops’ in 2022. Summing across the 4 regions gives intended 2022 upland cotton area of 11.9 million acres, 7.1% above 2021.

Overall, the survey indicates that growers intend to plant 24.8% more ELS cotton in 2022, likely due to higher ELS prices. California growers expect to plant 30.4% more ELS cotton, while Arizona growers expect to plant 5.9% more ELS cotton in 2022. New Mexico ELS acreage is expected to increase by 11.0%, while Texas growers expect to increase ELS acreage by 16.3%. Overall, U.S. cotton growers intend to plant 158 thousand ELS acres in 2022. Summing together the upland and ELS cotton intentions shows U.S. all-cotton plantings in 2022 of 12.0 million acres, 7.3% higher than in 2021.

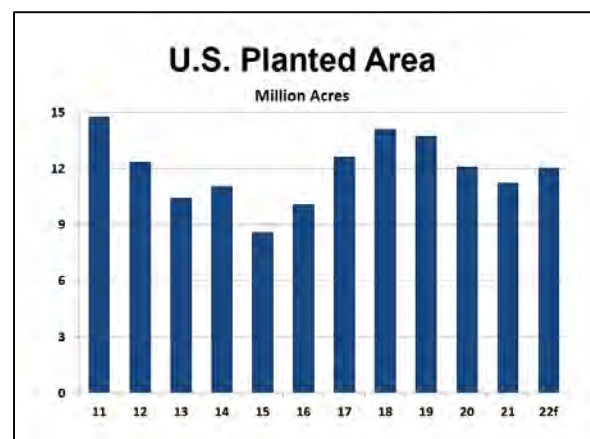


Figure 55 - U.S. Planted Area

### 2022 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. While prices have increased in the past year, many producers continue to face difficult economic conditions heading into 2022. High inflation along with supply chain issues have resulted in significant increases in input costs in 2022. However,

despite the challenging conditions, cotton is still the better alternative for many growers, particularly in the Southwest. In the Southeast and Mid-South, cotton continues to be a good alternative, but some growers expect higher returns from other crops in 2022. In the West, expected water availability is influencing cotton acreage decisions.

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.

Based on the state-level 10-year average abandonment rates and 5-year average yields, 2022 harvested area is estimated to be 9.8 million acres with an overall abandonment rate of 18.9% (Figure 56). U.S. production is estimated to be 17.3 million bales with an average yield of 850 pounds per acre, which includes 16.8 million upland bales and 438,000 ELS bales.

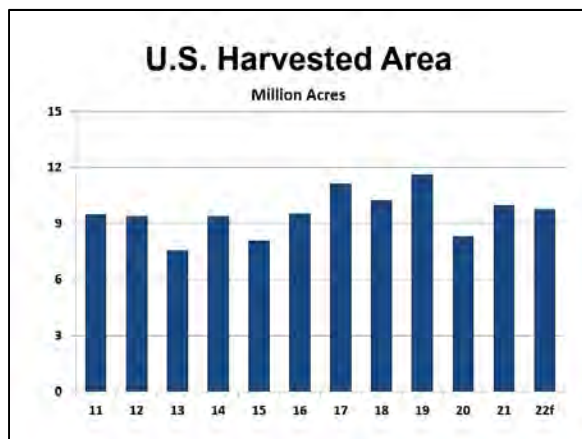


Figure 56 - U.S. Harvested Area

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 21.6 million bales (Figure 57). This is an increase of 850 thousand bales from the 2021 level.

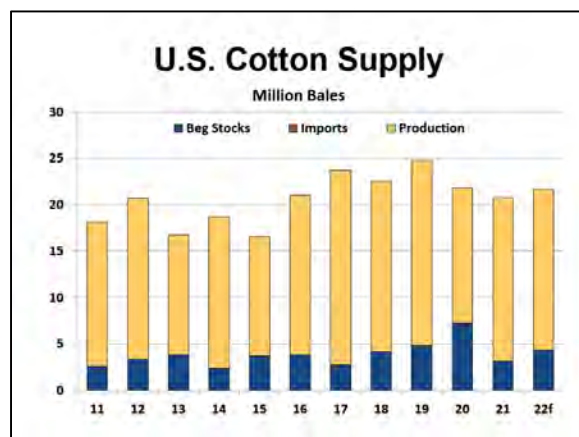


Figure 57 - U.S. Cotton Supply

For cottonseed, multiplying the point estimate of lint production by an average lint-seed ratio generates expected production of 5.3 million tons in the 2022 marketing year. With 395 thousand tons of beginning stocks, 2022 cottonseed supply totals 5.7 million tons (Figure 58).

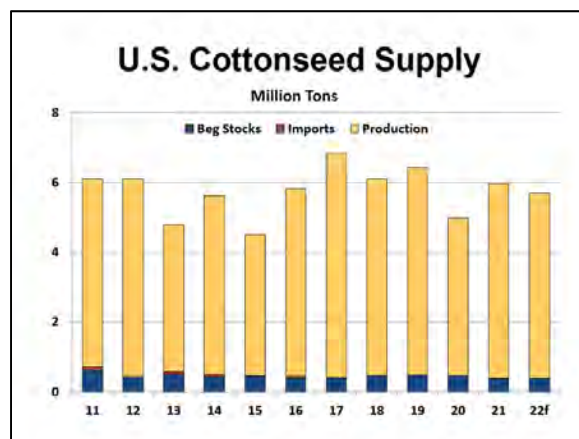


Figure 58 - U.S. Cottonseed Supply

**Table 4 - Prospective 2022 U.S. Cotton Area**

	2021 Actual (Thou.) 1/	2022 Intended (Thou.) 2/	Percent Change
<b>SOUTHEAST</b>	<b>2,326</b>	<b>2,413</b>	<b>3.7%</b>
Alabama	405	425	5.0%
Florida	91	87	-4.0%
Georgia	1,170	1,186	1.3%
North Carolina	375	405	8.0%
South Carolina	210	231	10.0%
Virginia	75	79	4.7%
<b>MID-SOUTH</b>	<b>1,630</b>	<b>1,868</b>	<b>14.6%</b>
Arkansas	480	555	15.7%
Louisiana	110	166	51.2%
Mississippi	450	479	6.5%
Missouri	315	334	5.9%
Tennessee	275	333	21.1%
<b>SOUTHWEST</b>	<b>6,955</b>	<b>7,440</b>	<b>7.0%</b>
Kansas	110	127	15.2%
Oklahoma	495	523	5.6%
Texas	6,350	6,791	6.9%
<b>WEST</b>	<b>182</b>	<b>156</b>	<b>-14.1%</b>
Arizona	120	93	-22.7%
California	26	24	-7.7%
New Mexico	36	40	10.0%
<b>TOTAL UPLAND</b>	<b>11,093</b>	<b>11,877</b>	<b>7.1%</b>
<b>TOTAL ELS</b>	<b>127</b>	<b>158</b>	<b>24.8%</b>
Arizona	9	10	5.9%
California	88	115	30.4%
New Mexico	13	14	11.0%
Texas	17	20	16.3%
<b>ALL COTTON</b>	<b>11,220</b>	<b>12,035</b>	<b>7.3%</b>

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 2021 increased by approximately 11,300 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 increased from the previous year and was estimated at 2.5 million bales in calendar 2021, 30.9% above 2020 (Figure 59). For calendar 2022, NCC forecasts domestic mill use of cotton at 2.6 million bales. NCC projects domestic mill use of cotton at 2.7 million bales for the 2022 marketing year, above the 2021 estimate of 2.6 (Figure 60). U.S. mills continue to be important and consistent customers of U.S. cotton.

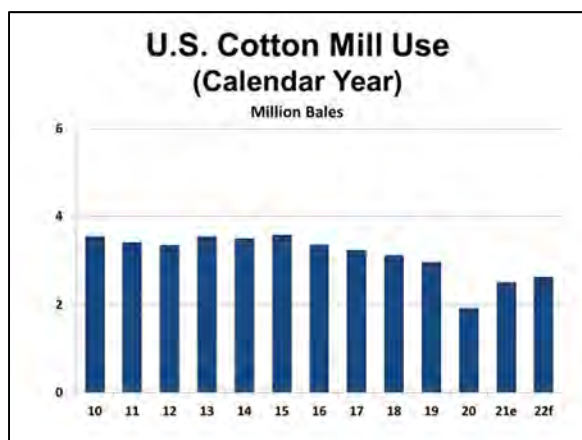


Figure 59 - U.S. Cotton Mill Use (Calendar Year)

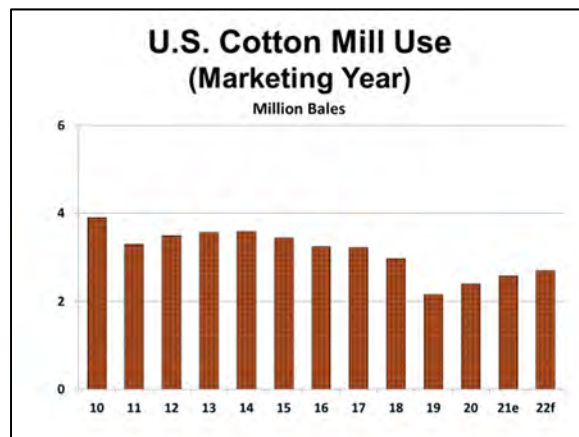


Figure 60 - U.S. Cotton Mill Use (Marketing Year)

#### 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 2022, 37 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 2021 was estimated to be 20.5 million bale equivalents (Figure 61). For 2022, NCC projects net domestic consumption of cotton to increase to 20.8 million bales.



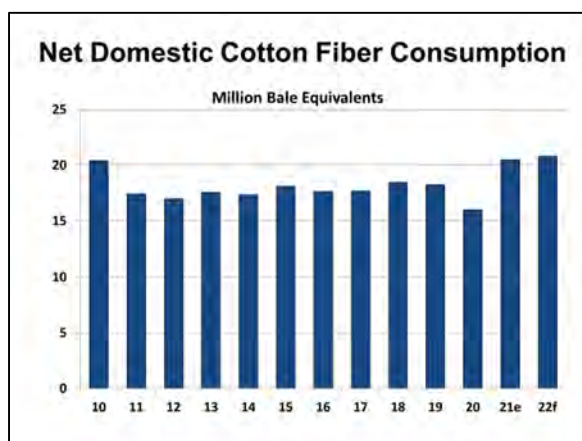


Figure 61 - Net Domestic Cotton Consumption

Imported goods make up the largest portion of U.S. net domestic consumption. Imported cotton textiles increased from 16.4 million bale equivalents in 2020 to an estimated 20.9 million in 2021 (Figure 62).

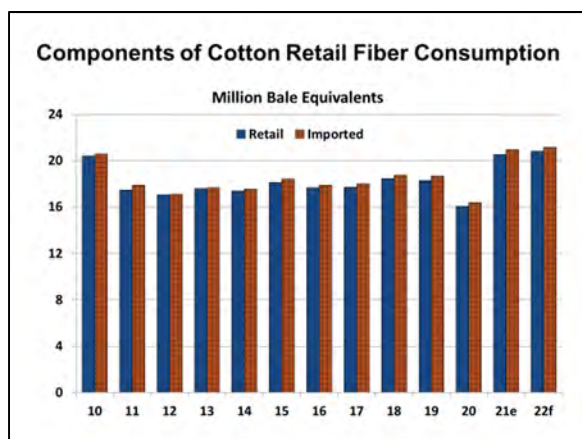


Figure 62 - Components of Retail Cotton Consumption

## Textile Trade

Imports of cotton goods in calendar 2021 were estimated to have increased by 27.8% to 20.9 million bale equivalents (Figure 63). In calendar 2022, NCC projects cotton textile imports to increase to 21.1 million bales.

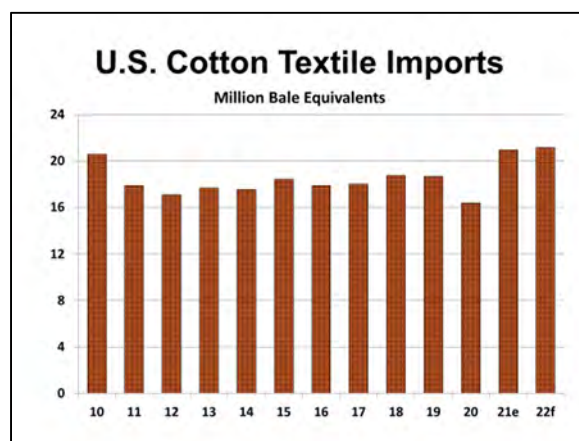


Figure 63 - U.S. Cotton Textile Imports

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 23.8% of all cotton goods imported in 2021 contained U.S. cotton. This was a 0.01% increase from the previous year. In bale equivalents, these imported cotton goods contained 5.0 million bales of U.S. cotton (Figure 64). This was due, in large part, to our trading partners in USMCA and the CBI.

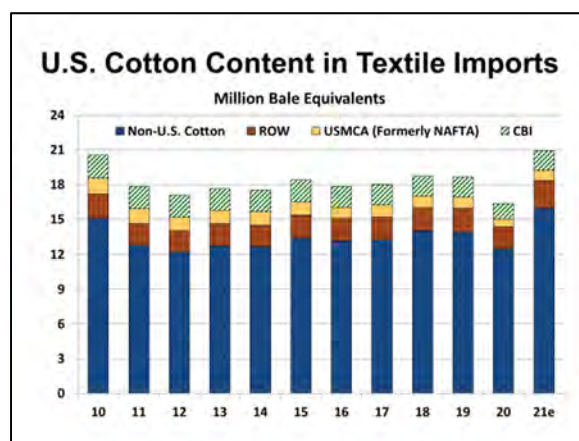


Figure 64 - U.S. Cotton Content in Textile Imports

### 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 14.0 million bale equivalents for 2021, up 32.1% from 2020. Imports of cotton home furnishings (including floor coverings) increased 25.9% in 2021 to an estimated 5.2 million bale equivalents. Cotton yarn, thread and fabric imports increased 8.2% in 2021 to an estimated 1.7 million bales.

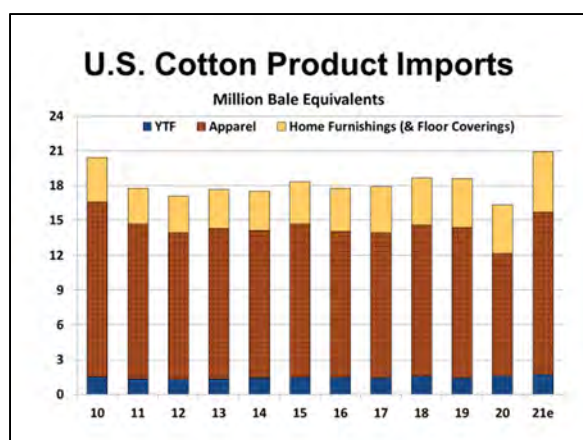


Figure 65 - U.S. Cotton Product Imports

Once again, countries in USMCA and CBI represented significant sources of imported cotton goods in 2021 (Figure 66). Imports from Mexico in 2021 were estimated at 836 thousand bales, up 36.2% from the previous year (Figure 67). Imports of cotton goods from Canada increased to an estimated 72 thousand bales in 2021, up 2.0% from the previous year (Figure 68). Imported cotton goods from CBI for the year were estimated at 2.2 million bale equivalents (Figure 69), up 33.8% 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 2021 were 2.0 million, or 88.9% of the cotton textile imports from CBI. Combined, imports from USMCA and CBI countries increased 33.5% and

accounted for 15.0% of total U.S. cotton product imports in 2021.

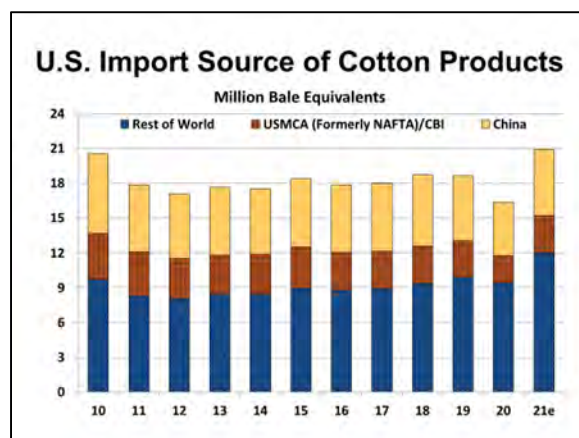


Figure 66 - U.S. Import Source of Cotton Products

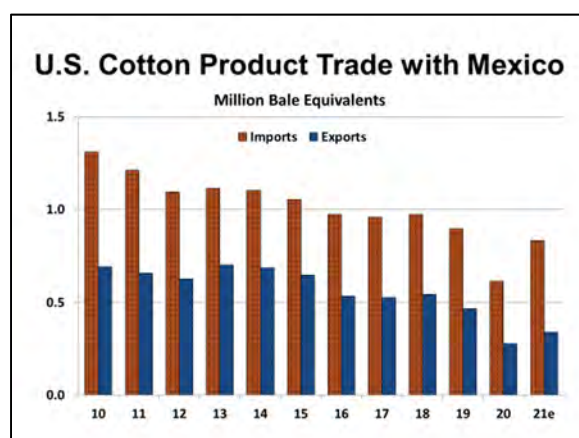


Figure 67 - U.S. Cotton Product Trade with Mexico

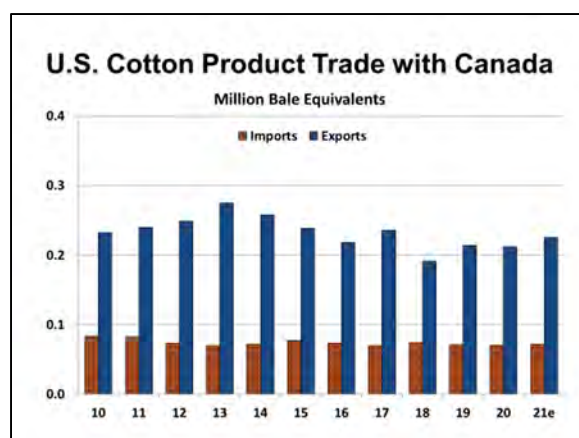


Figure 68 - U.S. Cotton Product Trade with Canada

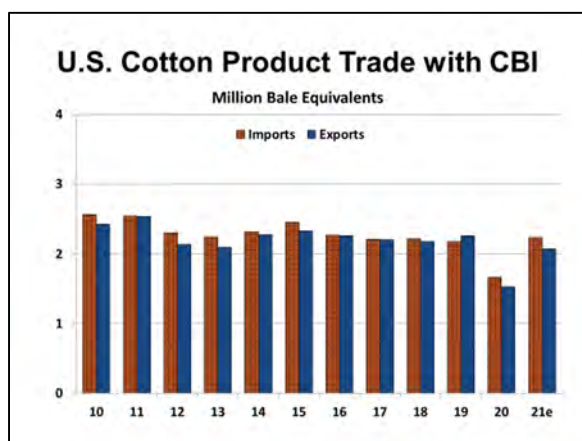


Figure 69 - U.S. Cotton Product Trade with CBI

Other top sources of imported cotton goods in 2020 were China, India, Pakistan, Vietnam, Bangladesh, Indonesia, and South Korea. For the seventeenth consecutive year, China was the largest supplier of cotton textile imports into the U.S. (Figure 70). Total cotton product imports from China increased to an estimated 5.7 million bale equivalents in 2021, up 24.6% from 2020 but up by 598% 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 27.4% in 2021.

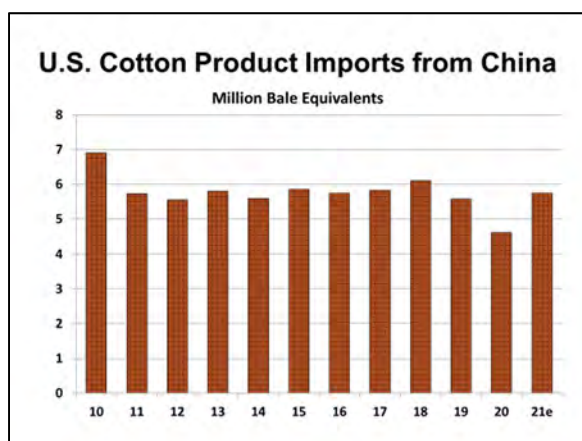


Figure 70 - U.S. Cotton Product Imports from China

Imports of cotton products from Pakistan were estimated at 2.2 million bale equivalents in 2021, an increase of 584 thousand bales. Pakistan's share of imported

cotton goods in the U.S. market increased last year to 10.4%.

Imports from India stood at 2.9 million bale equivalents for 2021. This was a 41.7% increase from last year. India now accounts for 14.0% of all U.S. cotton product imports.

Imports from Indonesia in 2021 were 535 thousand bale equivalents, up 18.3% from 2020. Indonesia's share of imported cotton goods in the U.S. decreased to 2.6% in 2021.

Bangladesh showed an increase in cotton product imports into the U.S. when compared to the previous year. Imports from Bangladesh in 2021 were up 34.6% from 2020 to 1.9 million bale equivalents. Bangladesh accounted for an estimated 9.2% of all cotton goods imported into the U.S. in 2021.

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 2.0 million bale equivalents in 2021, up 21.8% from 2020. Vietnam's share of cotton goods imported into the U.S. in 2021 decreased slightly to 9.4%, down 0.5% from the previous year. Cotton product imports from South Korea increased 6.8% from 2020 to 139 thousand bale equivalents in 2021.

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 2021. Cotton trousers remained the largest category of imported cotton goods from Mexico. Trousers accounted for 25.3% of all cotton product imports from Mexico based on SME (Figure 71). Knit cotton shirts were the next largest category of imports, accounting for 16.9%, followed by “other cotton apparel” (14.5%) and “other cotton manufactures” (9.1%). 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.

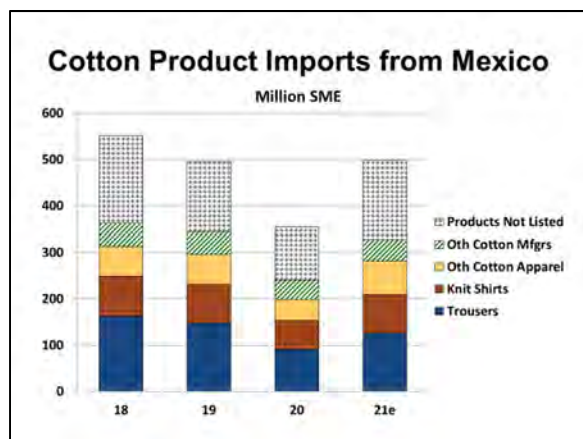


Figure 71 - Cotton Product Imports from Mexico

### Canada

U.S. cotton SME imports from Canada increased slightly in 2021. The largest category of imports from Canada in 2021 was “other cotton manufactures”, which accounted for 30.4% of total SME of cotton product imports from Canada (Figure 72). The next largest category was “other cotton apparel” with 11.8% of total imports, followed by bedspreads and quilts at 3.2% and knit cotton shirts at 2.0%.

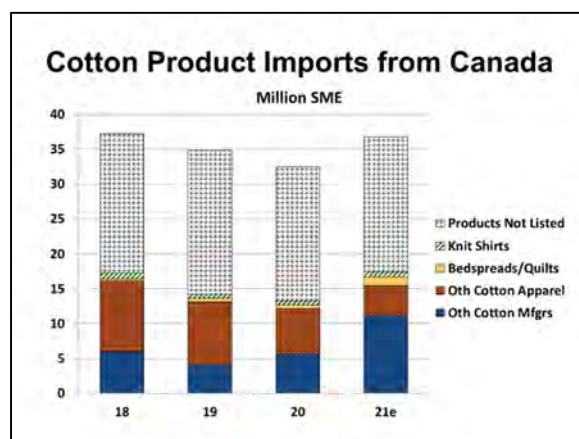


Figure 72 - Cotton Product Imports from Canada

### Caribbean Basin Initiative (CBI)

Continuing the trend, CBI countries shipped more cotton goods to the U.S. than did USMCA (formerly NAFTA) countries in 2021. The largest category of imported cotton goods from the region was knit shirts, accounting for 53.6% of total imports, based on SME (Figure 73). Approximately 88.3% of the cotton knit shirt imports from CBI came from the CAFTA-DR countries. Underwear, the second largest category, accounted for 25.3% of imports, followed by cotton trousers (9.7%) and cotton hosiery (3.4%). Of these imports, 89.2% of the underwear, 82.4% of the cotton trousers and 100.0% of the cotton hosiery were from the CAFTA-DR countries.

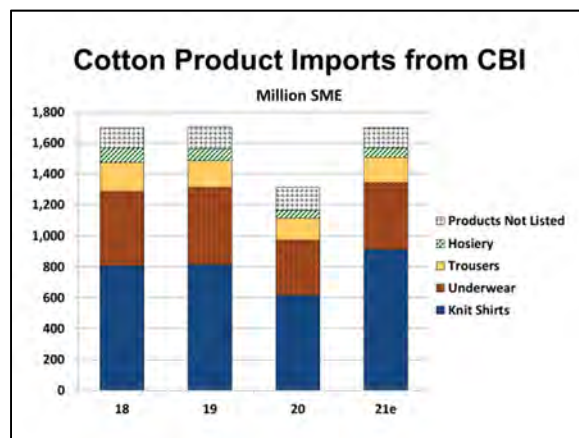
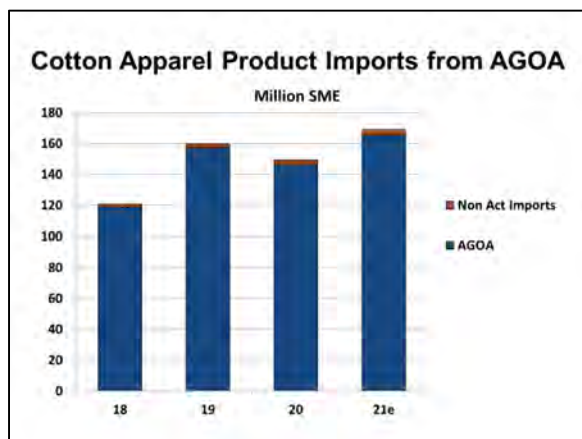


Figure 73 - Cotton Product Imports from CBI

### **African Growth & Opportunity Act (AGOA)**

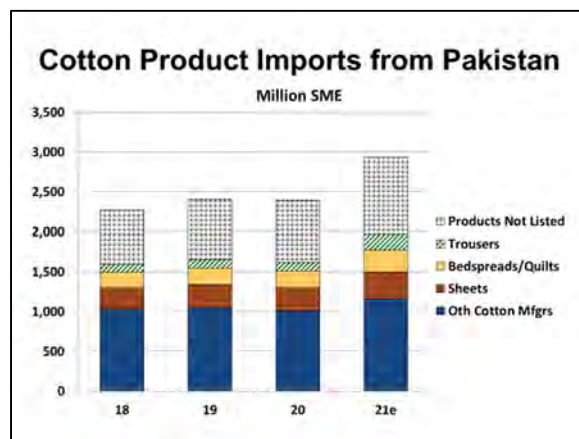
Over the past year, total cotton apparel product imports from the AGOA region increased by 5.8% to an estimated 169.0 million SMEs (Figure 74). During the past year, the percentage of U.S. cotton apparel imports from the AGOA region receiving preferential treatment under the act decreased slightly from 97.8% to 97.7%.



**Figure 74 - Cotton Apparel Product Imports from AGOA**

### **Pakistan**

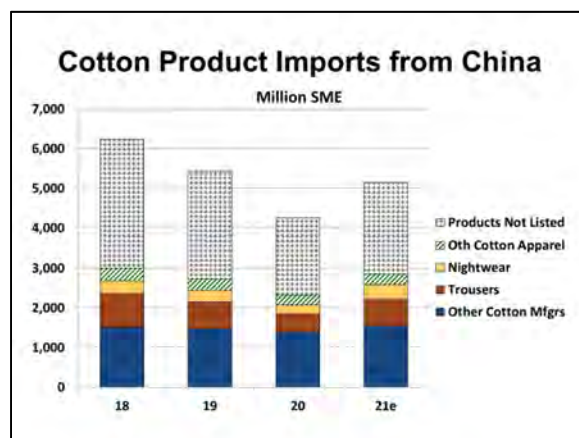
The largest category of imported goods from Pakistan in 2021 was “other cotton manufactures” (Figure 75). This category accounted for 39.5% of all cotton product imports from Pakistan based on SME. The second largest category imported from Pakistan was cotton sheets with 11.7% of total imports, followed by bedspreads and quilts (9.2%) and cotton trousers (6.5%).



**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 2021 was “other cotton manufactures”, which accounted for 30.1% of all cotton product imports from that country (Figure 76). Trousers was the second largest category, comprising 13.1% of total cotton product imports from that country. Nightwear accounted for 7.1% of U.S. cotton textile and apparel imports from China in 2021. “Other cotton apparel” was the fourth largest category and accounted for 5.2% 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 2021 was the category of “other cotton manufactures” (Figure 77). When based on SMEs, this category represented 35.7% of all cotton goods imported from India. The next largest category was cotton sheets (12.3%), followed by underwear (4.4%) and knit shirts (4.1%).

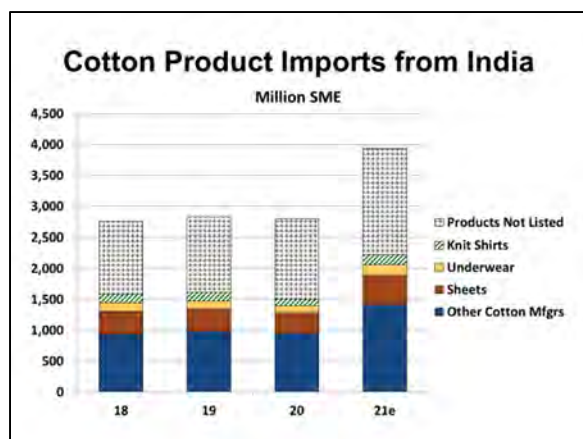


Figure 77 - Cotton Product Imports from India

### Indonesia

The largest category of imported cotton goods from Indonesia in 2021 was cotton trousers (Figure 78). When looking at SMEs, cotton trousers accounted for 31.7% of all cotton products imported. The second largest category was cotton knit shirts with 16.6% of imports, followed by cotton dresses (11.6%) and nightwear (6.1%).

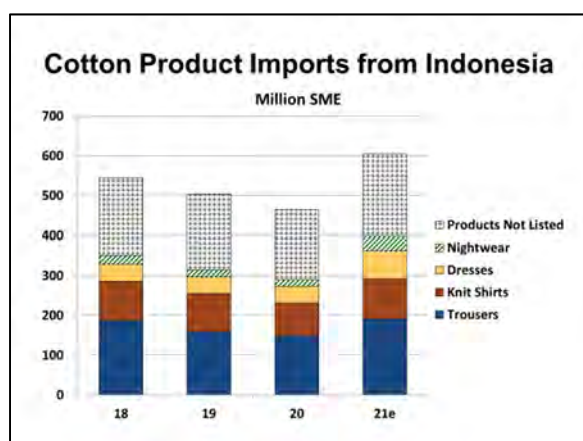


Figure 78 - Cotton Product Imports from Indonesia

### Bangladesh

Based on SMEs, the largest category of cotton goods imported from Bangladesh in 2021 (34.0%) was trousers (Figure 79). The second largest category in 2021 was woven shirts (26.3%). Cotton underwear was the third largest category in 2021, representing 13.5% of total cotton goods imported from Bangladesh, followed by knit shirts at 11.8%.

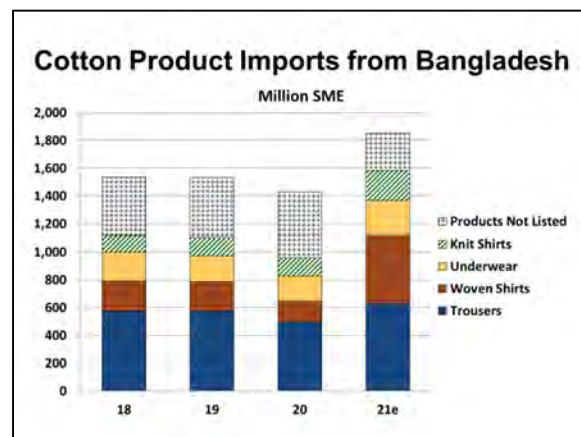


Figure 79 - Cotton Product Imports from Bangladesh

### 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 8,246% 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 2.0 billion SME in 2021. The largest category of imported cotton goods from Vietnam in 2021 was trousers. Based on SMEs, this category represented 23.3% of all cotton goods imported from Vietnam. The next largest category was underwear (19.5%), followed by knit shirts (15.2%) and nightwear (7.6%).



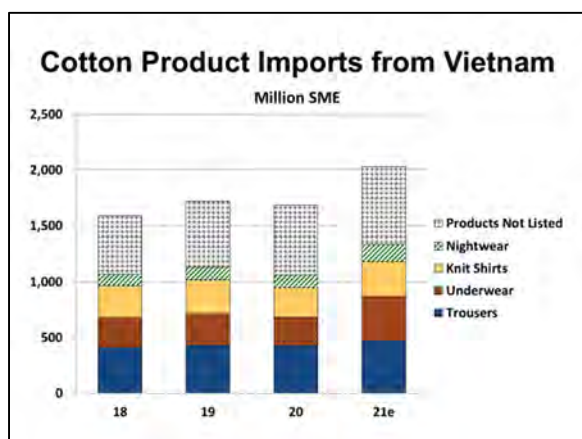


Figure 80 - Cotton Product Imports from Vietnam

### South Korea

Based on SMEs, the largest category of cotton goods imported from South Korea in 2021 was combed cotton yarn, which accounted for 33.2% (Figure 81). The second largest category in 2021 was cotton sheeting fabric (28.2%), followed by cotton hosiery (6.9%) and cotton gloves and mittens (5.6%).

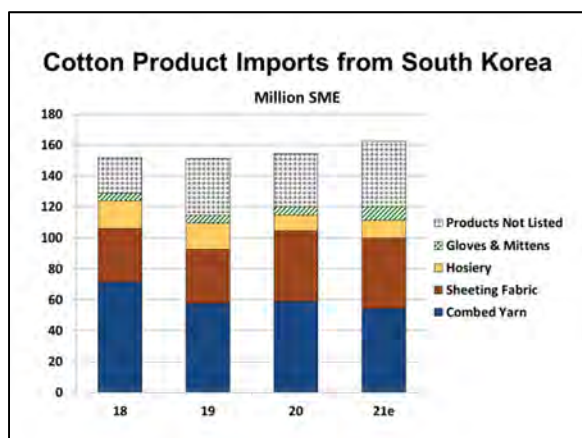


Figure 81 - Cotton Product Imports from South Korea

### Turkey

Based on SMEs, the largest category of cotton goods imported from Turkey in 2021 was “other cotton manufactures”, which accounted for 32.8% (Figure 82). The second largest category in 2021 was cotton sheets (10.4%), followed by cotton trousers (9.2%) and terry towels (8.7%).

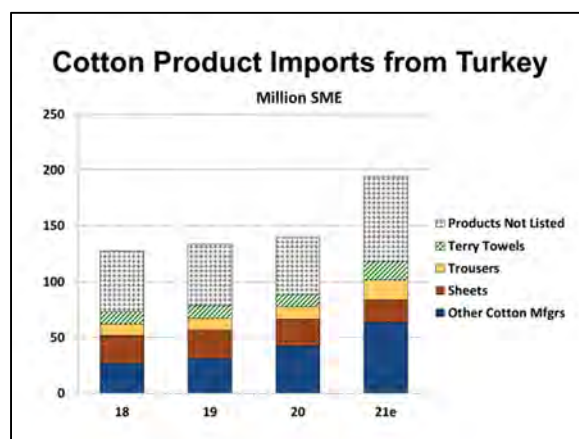


Figure 82 - Cotton Product Imports from Turkey

### U.S. Cotton Product Exports

Exports of U.S. cotton textile and apparel products increased in 2021 (Figure 83) by 28.1% to an estimated 2.9 million bale equivalents. This increase was due to an increase in the major cotton export categories of yarn, thread and fabric and apparel (Figure 84). Exports of cotton yarn, thread, and fabric increased by 28.6% to 2.5 million bale equivalents. Exports of cotton apparel increased by 36.0% in 2021 to 297 thousand bale equivalents. Exports of home furnishings (including floor coverings) decreased by 0.5% over the previous year to an estimated 88 thousand bale equivalents. For 2022, NCC projects U.S. cotton textile exports to increase 44 thousand bales to 3.0 million bale equivalents.

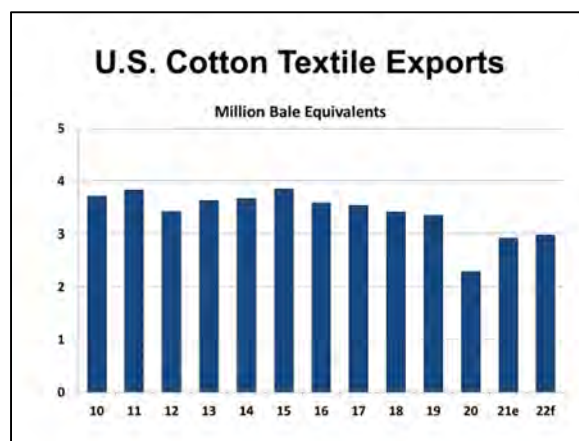


Figure 83 - U.S. Cotton Textile Exports

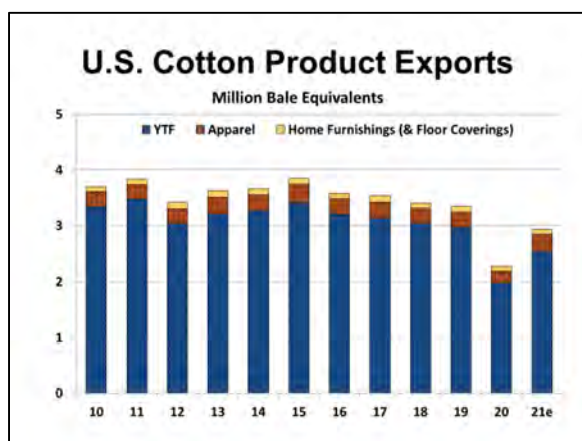


Figure 84- U.S. Cotton Product Exports

The top customers of exported U.S. cotton textiles and apparel in 2021 were once again the USMCA and CBI countries (Figure 85). Exports to the USMCA countries last year totaled an estimated 564 thousand bale equivalents, up 15.6% from the previous year.

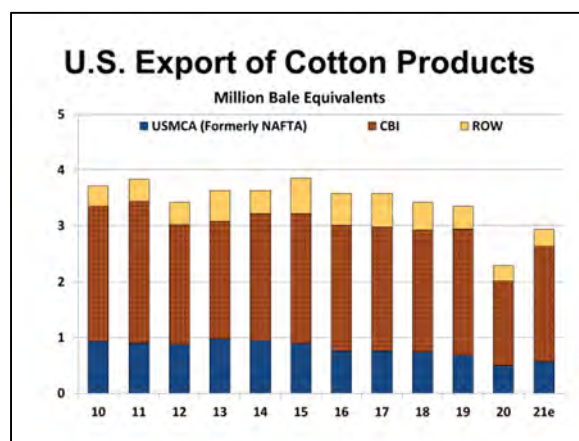


Figure 85 - U.S. Exports of Cotton Products

Exports to the region accounted for 19.3% of all U.S. cotton product exports. Exports to Mexico increased to an estimated 339 thousand bale equivalents from 276 thousand in 2020. Cotton product exports to Canada increased by an estimated 6.0% to 225 thousand bale equivalents for 2021.

U.S. exports to the CBI countries increased last year. In 2021, exports increased 35.6%, to 2.1 million bale equivalents or 70.7% of all U.S. cotton exports. Approximately 99.1% 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 \$0.85 and \$1.28 per pound during calendar year 2021 (Figure 86). For the current marketing year-to-date, the "A" Index has averaged \$1.17 per pound, \$0.32 higher than the previous marketing year.



Figure 86 - "A" (FE) Index

### World

World cotton production climbed to an estimated 121.0 million bales in 2021 (Figure 87). India and China were the leading producers followed by the U.S., Brazil, and Pakistan. The U.S. crop of 17.6 million bales was 3.0 million bales higher than in 2020.

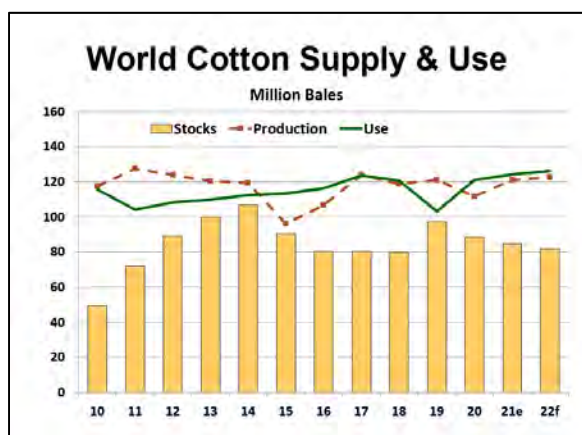


Figure 87 - World Cotton Supply & Use

World production lagged behind consumption in 2021. The latest world production estimate was 3.3 million bales lower than projected mill use of 124.3 million bales. Ending stocks were projected to fall to 85.0 million bales in the 2021 marketing year, resulting in a stocks-to-use ratio of 68.4%.

For the 2022 marketing year, world area is projected to grow by 4.0% to 84.0 million acres. World production is estimated to increase by 1.6 million bales in 2022 to 122.6 million bales. World consumption is projected to increase to 125.9 million bales in 2022. Ending stocks are projected to fall by 3.4 million bales in the 2022 marketing year to 81.5 million bales, resulting in a stocks-to-use ratio of 64.8%.

### China

China remained one of the largest cotton producers in 2021 with a crop of 27.0 million bales (Figure 88). However, the crop estimate was 2.5 million bales lower than in 2020 due to reduced yields and unfavorable weather during planting. China's cotton production continues to be centered in the Xinjiang province. Xinjiang cotton acreage was virtually unchanged from previous years due to support by the government's fixed subsidy policy. Xinjiang cotton production accounted for 87.3% of the nation's total cotton production in 2020. It was expected to account for 92.0% in 2021 according to China's National Statistics Bureau (NSB). Farmers in Xinjiang have benefitted from a target-price subsidy since 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. Yield is 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% of the harvest is hand-picked. Cotton planting in these regions is also impacted as farmers have more crop choices including grain and oilseeds (both demanding less labor inputs) and more work opportunities available in cities within the Yangtze River and the Yellow River regions.

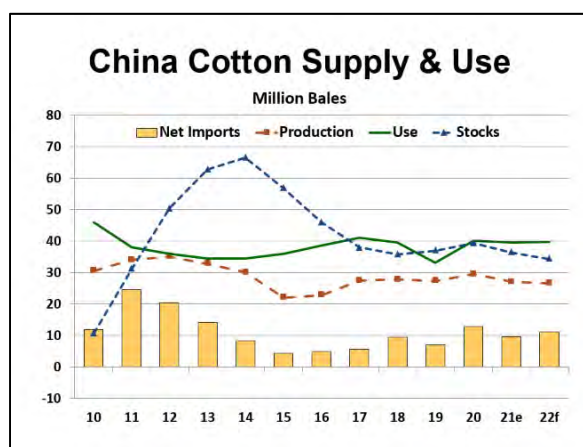


Figure 88 - China Cotton Supply & Use

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.

The higher yields in Xinjiang are due to a relatively advantageous climate for cotton farming as well as the ongoing mechanization process in the province, which is expected to continue. The benefits of mechanization are especially significant for those farms under the umbrella of the governmental Production and Construction

Corporation (PCC), which are organized on a larger scale than non-PCC farms and are better equipped to incorporate the latest technologies. The PCC farms benefit from more investment in infrastructure as well as superior extension services.

For China, a 2022 crop of 26.5 million bales was projected, down slightly from 2021 due to marginally lower area and yields. The modest decline in area is consistent with recent survey estimates by the China Cotton Association.

Domestic demand for textiles and apparel continues to be robust. The forecast is driven by recovering demand in the domestic market and increased orders from overseas. The textile and apparel sector took an economic hit as consumer spending dropped during the COVID-19 outbreak. However, consumption has recovered significantly as consumer confidence and spending recovered, restoring some of the lost demand in both the domestic and overseas markets. The recovery is likely to continue at a lower rate during the upcoming year. China's overall increase in demand for textile and apparel products is fueled by higher disposable income, rising living standards, population growth, and urbanization.

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. According to China's Textile Industry Association, China's spinning capacity was 110 million spindles as of the end of 2020. The sector has upgraded equipment and technology, with production efficiency advancing greatly in recent years. Chinese industry leaders believe cotton fiber use was down to 6 MMT (roughly 28.0 million bales) in 2020, falling 13.0% from the



previous year. The share of non-cotton fiber in yarn production was up to 65.3% in 2020.

With this in mind, a slight decrease in China mill use was expected for the 2021 marketing year. China was projected to consume 39.5 million bales in 2021. The gap between China's cotton consumption and production is currently around 12.5 million bales. From 2015-2018, the gap was filled with reserve sales and a small level of imports. An increase in cotton mill use is expected for the 2022 marketing year, up 250 thousand bales to 39.8 million bales. However, the projected growth is not without downside risks, including a continued slowdown in economic activity due to the ongoing impacts of the coronavirus, an escalation of trade tensions with the U.S. 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 more from the U.S., Australia, 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. Ongoing trade issues between the United States and China have allowed Brazil, Australia, and other countries to gain market share. Competing countries are also benefiting from the ongoing trade tensions between China and Australia that have largely locked Australia out of this market.

Cotton imports surged in 2020, up 5.7 million bales to an estimated 12.9 million

bales compared to the estimated 7.1 million bales imported in 2019. U.S. market share expanded significantly during this time to reach almost 45.0%, up from 30.0% in 2019. The increase in U.S. cotton imports likely reflects both the implementation of the U.S.-China Phase One Economic and Trade Agreement, higher overall global demand, and decreased supply of high-grade cotton from Xinjiang in marketing year 2020.

While cotton specific details were not disclosed in the Phase I agreement, China was expected to import between 4.0 and 6.0 million bales each calendar year based on historical data. In 2020, China imported 4.5 million bales of U.S. cotton in 2020 and 3.8 million bales of U.S. cotton in 2021 as compared to 1.7 million bales in 2019. Although the Phase I agreement did not include specific commitments for 2022, China's current tariff exclusion process applicable to U.S. cotton is assumed to continue throughout the timeframe of this economic outlook.

Chinese stocks are projected to fall by another 2.1 million bales during the 2022 marketing year to 34.3 million bales. If realized, stocks would be down over 32.0 million bales from the 2014 peak.

## India

According to the latest estimates, India produced 27.5 million bales of cotton in the 2021 marketing year (Figure 89). If these estimates hold, the 2021 crop would be slightly lower than the 2020 crop. For the past few years, India and China have been competing for the top spot in terms of cotton production. For the 2021 marketing year, India's production was slightly ahead of China.

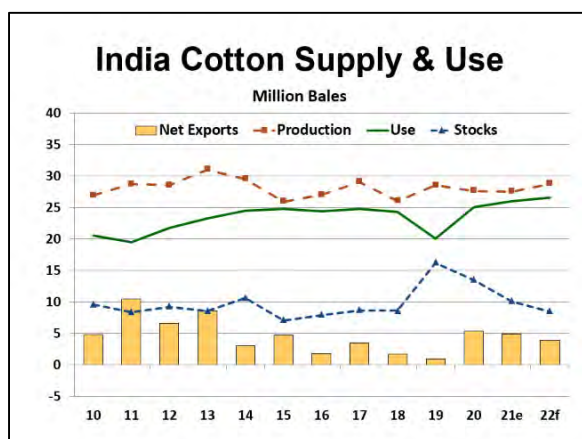


Figure 89 - India Cotton Supply & Use

India accounts for about one-third of global cotton area. Within India, the central cotton-growing zone produces the majority of all cotton; including, the states of Maharashtra, Madhya Pradesh, Gujarat, and Odisha, where much of the crop is rain fed. In Gujarat, the largest cotton growing state, cotton remains an important crop as the area is a hub for cotton and cotton product exports with a large ginning and spinning industry.

The northern zone, which consists of the states of Punjab, Haryana, and Rajasthan, produces cotton under irrigated conditions. According to the Ministry of Agriculture and Farmers Welfare (MOAFW), cotton area in Punjab and Haryana is 100.0% irrigated, while Rajasthan is 96.0% irrigated. North India cotton area and production constitutes 12.0% of the total cotton area and production in the country.

The southern region of India, which includes the states of Andhra Pradesh, Karnataka, and Tamil Nadu account for the remaining production of Indian cotton. The Central and Southern zones typically grow long duration cotton that allows farmers to reap multiple harvests. While the number of pickings has 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, the irrigated

cotton in the northern zone 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 MOAFW, the share of area under cotton is 6.1% of total crop area in India. Cotton yields have plateaued over the last five years with an average of roughly 421 pounds per acre.

Area under BT (*Bacillus thuringiensis*) cotton and other improved varieties have reached an estimated 90.0%. 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 growth.

Additionally, yields in India tend to be lower because farmers provide more row space between cotton plants to traverse with a bullock and cultivator for weed control purposes. This lower plant density in the field is offset to some extent by the multiple pickings farmers complete through manual rather than machine harvesting. To combat this, researchers are working on production schemes with higher plant populations that could improve yields.

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 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.

Various federal and state government agencies and research institutions are engaged in cotton variety development, seed distribution, crop surveillance, integrated pest management, extension, and marketing activities. In 1999, the federal government launched the Technology Mission on Cotton (TMC) to improve the availability of quality cotton at reasonable prices. The goal of the TMC is to bring about an improvement in the production, productivity, and quality of cotton through research, technology transfer, and improvement in the marketing and raw cotton processing sectors.

In terms of marketing, the government of India (GOI) 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), a government-run procurement and distribution company, 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 2022, India's harvested area is projected to increase in response to higher cotton prices. Production is projected to grow to 28.7 million bales in 2022, which represents the largest crop since 2017.

Mill consumption was expected to increase in 2021 to an estimated 26.0 million bales, 1.0 million bales higher than the 2020 marketing year. One reason for this expectation was the improvement in COVID-19 conditions. While the pandemic led to a significant drop in business activity in 2020, there has been a gradual recovery in both supply and demand for cotton. The impact of COVID-19 was seen across major suppliers and consumers of cotton and cotton products, with major doubts on the growth prospects for cotton consumption. Mills implemented production cutbacks as retail sales declined due to store closures, which had an impact on the entire supply chain. The Government of India mandated a 21-day countrywide lockdown causing supply chain disruptions. The curtailment of travel (banned domestic and international travel) affected businesses' ability to conduct sales and discussions which limit new business generation. The demand outlook is much more positive for the 2021 marketing year as mass vaccination drives across the country will lead to improved retail demand in the second half of marketing year 2021. Continued growth is expected for the 2022 marketing year. With continued government support and ample supplies of cotton, India's mill use should increase slightly to 26.5 million bales in the 2022 marketing year.

In 2022, India's net exports are expected to fall to 3.8 million bales. India's stocks are projected to drop to 8.5 million bales in the 2022 marketing year.

In terms of the global trade picture, one major issue that may dampen growth prospects is the rise in freight costs due to a shortage of shipping containers. According to trade sources, the cost of shipping cotton yarn in a 40-foot container to Asian markets has increased four-fold. Similarly, shipment costs to Central America have increased by 40.0%, and shipping delays have increased

the number of days for delivery from 45 to 60 days. Official sources indicate that issues related to availability of containers, and the subsequent delays and costs will continue to persist for the Indian exporters for several months, which will slowdown trade.

## Uzbekistan

Current estimates put Uzbekistan cotton production at 3.4 million bales for 2021 (Figure 90).

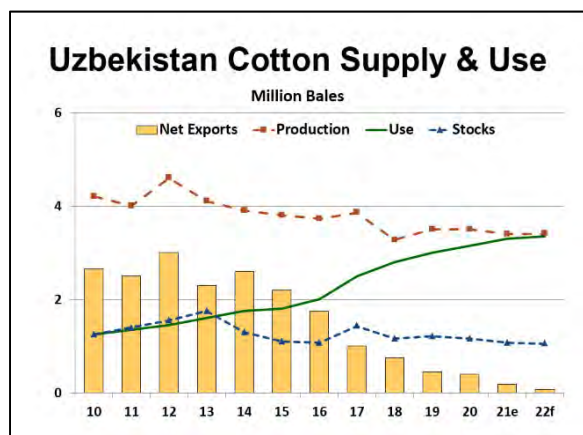


Figure 90 - Uzbekistan Cotton Supply & Use

The government of Uzbekistan (GOU) continues to play a major role in cotton production. As a major development for the cotton industry of the country, in March 2020, Uzbekistan liberalized the cotton market with a presidential decree.

Starting from the 2020 harvest season (approximately September - October), Uzbekistan canceled state regulation of cotton production, price, and mandatory sales plans. The Government of Uzbekistan (GoU) officially canceled state production quotas of cotton and let farmers choose which crops to plant. GoU will not declare a price for raw cotton starting with the harvest of 2020. An indicative price will be published in the media in the beginning of December as a recommendation only. Furthermore, cotton producers will have the right to freely choose the cotton variety they would like to grow, although a certified seed

delivery system will be maintained.

According to the decree, in the regions where there are no cotton clusters, voluntary cooperatives of farms will be organized with the participation of cotton ginning enterprises. The main tasks of these cooperatives will be the organization of joint-use machines, equipment, vehicles, and factories by members of the cooperative.

The cluster structure in cotton production will continue. The decree liberalizing the cotton market of Uzbekistan mentions that a regulation on the organization of cotton-textile production and clusters for effective organization of cotton production will be issued. Another decree allows for the establishment of cotton production cooperatives and raw cotton processors in the provinces where no cotton-textile clusters exist. These cooperatives will be based on cotton ginneries and voluntary associations of farms.

In addition, according to the decree, starting from March 15, 2020, a new credit mechanism for production and processing of raw cotton will be introduced. Commercial banks, at the expense of the State Agricultural Support Fund, will provide loans to cover the expenses of farms, cotton-textile clusters and cooperatives and seed-growing facilities under the Seed Development Center for production of raw cotton for up to 12 months. In order to provide cotton farmers with seeds, the system for supplying certified seeds (including the current procedure for paying premiums for seed cotton) will be maintained. This responsibility will be gradually reallocated to seed-growing clusters in the structure of the Seed Development Center under the Ministry of Agriculture, as well as cotton-textile clusters. Seed-growing facilities and cotton-textile clusters under Uzpakhtasanoat were to supply cotton seeds for the 2020 harvest in order to provide agricultural producers

with high-quality seeds adapted to local conditions in time for planting. In coming months, Uzpakhtasanoat, the monopoly which has controlled production quotas and exports of cotton, was to be liquidated according to the presidential decree.

The GoU and the European Union (EU) signed a financial agreement in March 2020. The EU will provide 40 million Euros as budgetary support (grants not loans) to Uzbekistan in order to reform and improve the agricultural sector. This project is aimed at assisting in the implementation of the new state Strategy for the Development of Agriculture for 2020 – 2030, strengthening public services to provide assistance to farms and agricultural enterprises. The GoU informed the public that they are committed to undertaking a wide range of reforms in the agriculture sector. This includes actions on agriculture land reform, development of new services to advise farmers, improve access to information, knowledge and innovation, reform of training and education systems, digitalization of the sector and investment in agri-logistics infrastructure and services. All of these actions are aimed at improving the competitiveness of agricultural products of Uzbekistan both domestically and in international markets. Despite these announcement, actual implementation of innovative technologies, improved information, and extension services and training remains minimal.

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 2022 marketing year, Uzbekistan cotton production is projected to remain unchanged at 3.4 million bales.

The most important trend in the cotton sector in Uzbekistan is the effort to consume all produced cotton in the country and not export it as raw material. According to government sources, presently about 500 enterprises are engaged in textile production in Uzbekistan. The Uzbekistan government is encouraging new partnerships to increase the use of cotton domestically. New textile investments have been approved and new mills are expected to start operation that will increase domestic consumption in the coming years. At the same time, existing mills are increasing their capacity as well. Government officials claim that due to the rapid increase in domestic consumption, Uzbekistan was aiming to utilize all local cotton production domestically as early as the 2020 marketing year. Although this goal was not completely reached by this time, Uzbekistan has done a good job, so far, of consuming the vast majority of its cotton domestically and exporting yarn and fabric instead. Uzbekistan will likely continue to export a small amount of raw cotton in years to come since exporting is not legally banned.

Uzbekistan is moving forward with the new concept of implementing clusters for cotton and textile production to vertically integrate more of the sector and increase foreign investment. Through the textile clusters concept, the government will support foreign companies through tax and customs benefits, as well as providing land to grow cotton, process cotton, and produce final garments.

As a result of the ongoing expansion and investment, Uzbekistan domestic cotton consumption was estimated at 3.3 million bales in the 2021 marketing year. For 2022, Uzbekistan's mill use is projected to increase to 3.4 million bales.

CIS countries were the initial market for Uzbek textiles. Additionally, the Uzbek

cotton importing countries from recent years, such as China and Russia, have also now become markets for Uzbek cotton yarn and textile products. An agreement signed with the European Union, which went into force in June 2017, reduced the tariff for Uzbek textile goods, which will facilitate Uzbek textile exports to this market as well. An agreement signed between Uzbekistan and Georgia on mutually lowering shipping charges on railways will also facilitate Uzbekistan's utilization of the newly opened railroad connection between Baku, Azerbaijan, through Tbilisi, Georgia, to Kars, Turkey and onward to Turkish and European markets. The new railroad track will facilitate exports of cotton and products, among other goods, from Central Asia, including Uzbekistan, to Turkey and beyond. The new route will significantly shorten shipping time and may help those countries to increase their exports significantly in coming years. All of these developments are expected to help increase Uzbek cotton products exports, hence increase domestic consumption of Uzbekistan cotton.

## **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 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.

Based on sufficient rainfall from December 2020 to January 2021 and heavy winter snowfall, the water availability is expected to remain almost normal for the ensuing summer crops. There are several factors that affect yields including the following: 1) Climate Change: Pakistan is among those countries that are 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.; 5) 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; 6) 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; 7) Cottonseed Quality: This is a perpetual issue with low germination rates and weak certification; and 8) Government Policy: While a national textile policy has been drafted, this remains stalled and has not yet been approved nor implemented.

Factors that are supportive of higher yields include: 1) New Cotton Varieties: On January 28, 2021, the Punjab Seed Council (PSC) approved 15 new cotton varieties for cultivation in Pakistan. The major cotton-producing provinces of Punjab and Sindh are expected to benefit from these varieties. Field sources reveal that the supply of certified seed is better than last year. One such new variety was developed as a result of a USDA sponsored program (Cotton Productivity Enhancement Program), which developed the first ever CLCV resistant cotton variety IR-NIBGE-II. This variety was developed through National Institute of Biotechnology and Genetic Engineering (NIBGE) and approved by the PSC and is now available for general cultivation in

Pakistan. More sensitive but unclassified material is in the pipeline with various research institutes to yield results in future.; 2) Better Pest and Disease Management: Farmers are increasingly aware of the risks associated with the weak expression of the Bt gene in local cotton plants and the need to monitor for bollworms and other diseases. They are also increasingly attuned to the damage of sucking and chewing insects and work to incorporate mitigation measures in the field to manage these pests; and 3) Subsidies: The government continues to heavily subsidize the supply of inputs like seed, fertilizer, water, pesticides, and energy for farmers.

In 2021, cotton production was estimated at 5.8 million bales, 1.3 million bales higher than the 2020 estimate of 4.5 million bales. An increase in production is expected for the upcoming marketing year based on the projection of increased acres. Assuming normal weather conditions and lower pest infestation, production is projected to be 6.2 million bales in 2022 (Figure 91).

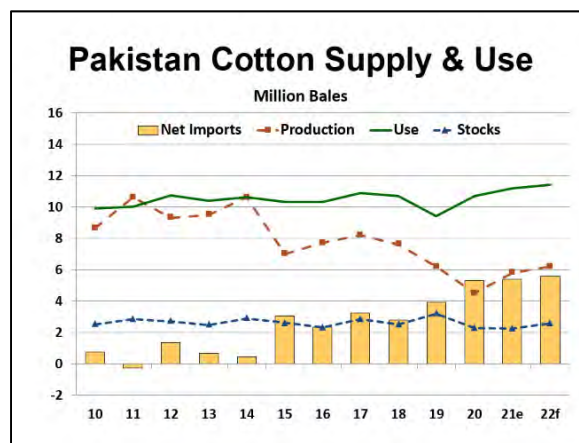


Figure 91 - Pakistan Cotton Supply & Use

Consumption is expected to increase to 11.4 million bales in 2022, up 200 thousand bales from 2021. 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 MMF are China and Europe. Support from the Pakistan government is in the form of tax relief, lower energy prices, and subsidized financing for the expansion of production and establishment of new textile mills.

Pakistan maintains minimal tariff restrictions on cotton imports, in the form of a 3.0% regulatory duty. However, there is a tendency to impose additional tariffs during harvest period to limit the flow of cotton in order to maintain domestic prices. Normally, from July to December, the government imposes an additional customs duty (usually 1.0% to 2.0%) and a 5.0% sales tax on imported cotton and exempts domestic cotton from the sales tax. However, for the past two years, the tariff and sales tax for imported cotton have dropped to zero starting in January, remaining in effect until July in order to facilitate supplies to the textile sector.

Although imports of cotton from India have dropped almost to zero due to 2019 border tensions that resulted in Pakistan turning to other international cotton suppliers, low cotton output was of sufficient concern that

Pakistan had seriously been considering the importation of Indian cotton and yarn in March 2021. However, this effort ultimately failed due to lack of government consensus, leaving the border still closed to imports of Indian cotton and yarn.

Pakistan is expected to increase net cotton imports for the marketing year to 5.6 million bales.

## Turkey

Production climbed to 3.8 million bales in 2021 (Figure 92). For 2022, production is projected to grow to an estimated 4.4 million bales due to increased cotton acres.

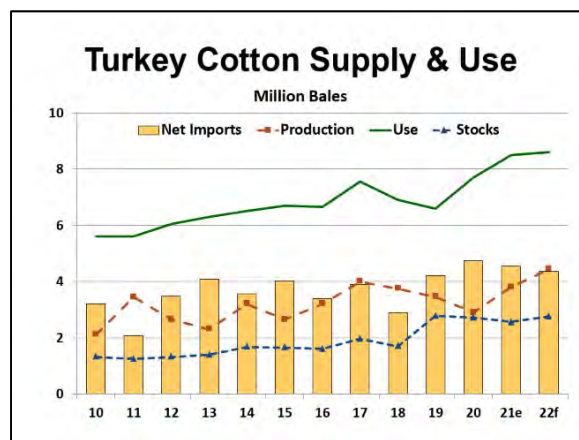


Figure 92 - Turkey Cotton Supply & Use

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). The GAP area is the northern Mesopotamia region, north of the Turkish – Syrian border. According to market sources, the investment pace has slowed in the last decade or so, especially in terms of the irrigation phases of the project. In addition to these three major planting zones, 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.

The GoT has spent more than US\$ 25 billion over the past three decades on a gigantic irrigation and agricultural extension project in southeast Anatolia known as the GAP project. When finished, the goal is that some 1.4 million hectares of land will be irrigated and a total of 22 dams will be completed. So far, about 79.0% of the hydroelectric projects are completed, but only 23.0% of the irrigation projects. During the last four years, the GoT allocated funds for the project to revitalize some of the irrigation projects. In a few years, it is expected that a total of 1.04 million hectares of land will be irrigated (both through the project and through the private sector's independent efforts), which could eventually increase cotton planting and production in the region. 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. Turkey's production capacity is estimated at 7.5 – 8.0 million spindles and

700,000 - 800,000 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. Turkish textile exporters have the advantage of faster order response times and higher quality compared to many of their competitors.

By March 2021, cotton yarn producers were working at full capacity, with orders booked for several months. The Turkish textile industry saw increased demand from both European and U.S. markets and the domestic market for comfortable home style clothing due to COVID-19. Market sources indicate that there are new cotton yarn production investments being made in Turkey.

Cotton imports are subject to zero import tax. However, between April 2016 and April 2021, U.S. cotton was subject to a 3.0% antidumping duty. Overall, despite the 3.0% duty, U.S. cotton was able to maintain its market share of roughly 40.0% of Turkey's imported cotton market.

For 2021, Turkey's mill use was expected to be higher than 2020 while net imports remained relatively unchanged. For 2022, Turkey's mill use is projected to increase slightly to 8.6 million bales. Turkey is projected to have net imports of 4.4 million bales in 2022, slightly lower than the 2021 marketing year.

## **Australia**

The latest estimate for Australia's 2021 cotton production was 5.5 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.

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 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.

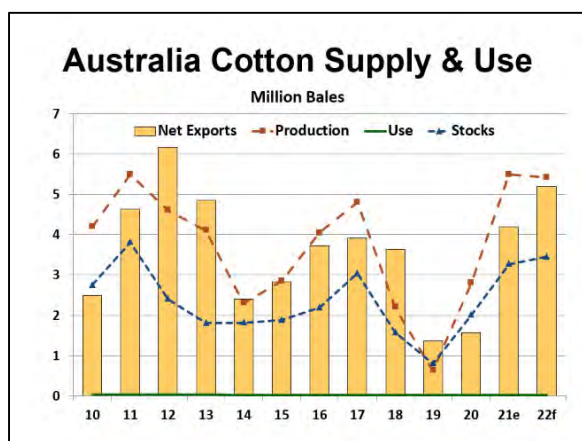
With improvements in cotton varieties suitable for differing growing conditions there has been some expansion of cotton areas in southern New South Wales and northern Victoria. Cotton growing trials are also in place in far north Queensland, Northern Territory, and also in Western Australia in the Ord River Irrigation Scheme. These areas offer substantial scope for expansion if they are determined to be suitable for growing cotton. An existing grower-owned ginning organization has announced that they will build a new facility in the Northern Territory near Katherine, the first in the region, and will be operational for the 2022 ginning season. This 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 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 decreases the further north 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, the trials in the Northern Territory and the adjacent Ord river region in Western Australia are grown with around 80.0% of the water requirement from in-crop rainfall, from tropical wet season rains, and 20.0% from irrigation. 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 2022. Nevertheless, production is estimated to go down slightly to an estimated 5.4 million bales. However, Australian cotton production has extreme volatility 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.

Australia exports practically all of its cotton production, primarily to Vietnam, China, Indonesia, Bangladesh, and India. China was previously the main export market but current trade tensions between China and Australia have limited Australia's access to the Chinese market.

Australia in typical years is the third or fourth largest exporter of cotton behind the United States, Brazil, and India. For the 2021 marketing year, net exports were estimated to climb to 4.2 million bales. With production of 5.4 million bales during the 2022 marketing year, net exports are expected to rebound to 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. Cotton has the highest adoption rate at 95.0%. As of December 2019, Brazil's National Technical Commission of Biosafety (CTNBio) had approved a total of 107 GE events for commercial cultivation, of which 23 are for cotton. Industry sources in Mato Grosso and Bahia indicate that the 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 13.2 million bales for the 2021 marketing year (Figure 94). Cotton acreage was an estimated 4.0 million harvested acres while yields were up to an estimated 1,603 pounds per acre in 2021.

Production for the 2022 marketing year is projected at 13.2 million bales. With the ongoing trade tensions between the U.S. and China, Brazil is responding to increased trade opportunities by maintaining a high level of cotton production.

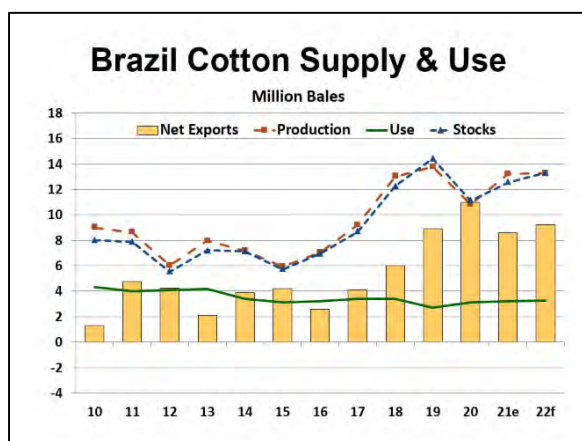


Figure 94 - Brazil Cotton Supply & Use

Brazilian mill use for the 2021 marketing year grew to an estimated 3.2 million bales when compared to the previous year. Brazilian cotton consumption is expected to climb in the 2022 marketing year with mill use estimated at 3.3 million bales.

In terms of trade, Brazil was expected to reach net exports of 8.6 million bales of cotton in the 2021 marketing year. For the 2022 marketing year, net exports are expected to climb to roughly 9.2 million bales. 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 2021 was estimated 6.2 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 5.9 million bales in 2022 (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 2021 marketing year, net exports of 6.1 million bales were projected. For 2022, West African net exports are expected to fall slightly to 5.8 million bales.

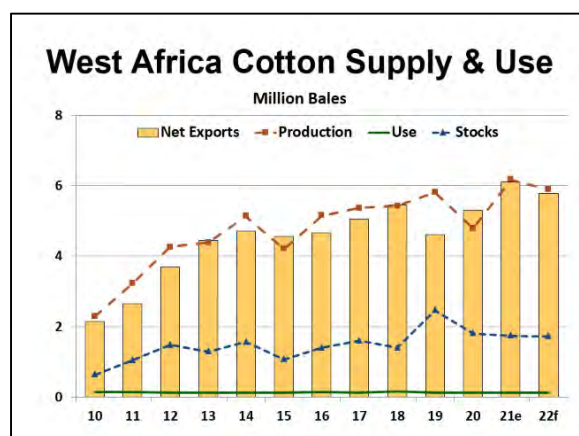


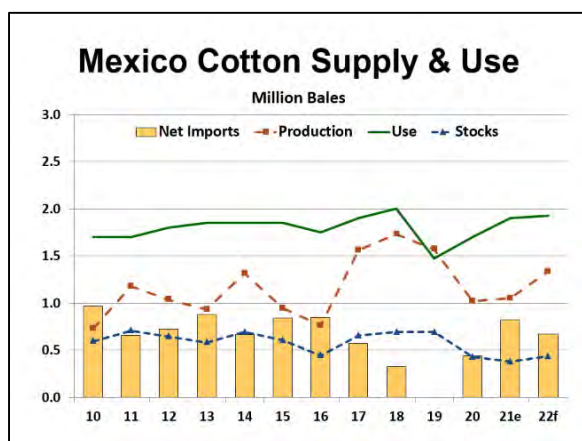
Figure 95 - West Africa Cotton Supply & Use

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 2021 reached an estimated 1.1 million bales. Production remains stable with an estimated crop of 1.3 million bales for the 2022 marketing year as both area and yield are up slightly when compared to the 2021 marketing year. (Figure 96).





**Figure 96 - Mexico Cotton Supply & Use**

In terms of consumption, Mexico's outlook remains basically unchanged. Marketing year 2021 mill use was estimated at 1.9 million bales. For the 2022 marketing year, Mexican mill consumption is projected to remain at the 1.9 million bale mark.

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. Although Mexico is experiencing another wave of COVID-19 infections, the

government has stated that no additional lockdowns or restrictions will be put in place, and workers in the private and public sector and students are returning to in-person activities. As both the Mexican and U.S. economies recover and reopen, demand for apparel is strong, and expected to increase for the foreseeable future.

Mexico is a significant supplier of jeans and t-shirts to the United States (made in Mexico with U.S. cotton), and according to the Office of Textile and Apparel (OTEXA), cotton t-shirts exported to the United States increased 53.0% in the first five months of 2021, compared to the same period in 2020. In fact, demand is so high, there is a shortage of raw materials for the creation of cotton yarns, fabrics and blends, and garment accessories. Contacts indicate they have reached pre COVID-19 production levels and would like to further increase production, but they are unable to procure machinery and raw materials in a timely fashion.

High international freight costs have also had an impact on the Mexican textile industry. With increasing international freight costs and container scarcity, 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.

Over the past 10 years illegal (without proper taxation) importation of textiles, mainly from Asia, have been undermining the domestic textile industry. The national chamber of the textile industry



(CANAINTEX) reported in 2020 that illegal importation of product resulted in a 30.0% reduction in domestic market demand for textiles and a 37.0% reduction for apparel products. Increasingly high transport costs have significantly decreased the importation of these low-cost textiles and apparel, further supporting domestic textile demand and cotton consumption.

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 climbed to an estimated 825 thousand bales during the 2021 marketing year. Mexico's net imports are expected to

fall to roughly 672 thousand bales for the 2022 marketing year.

## Indonesia

Indonesian cotton production was estimated to be 2 thousand bales for the 2021 marketing year (Figure 97). Current projections show this number unchanged in 2022.

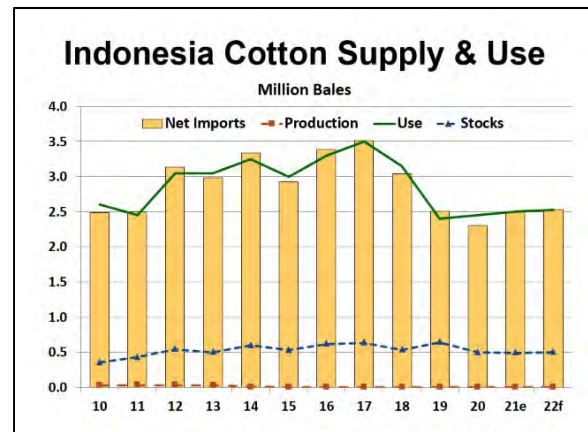


Figure 97 - Indonesia Cotton Supply & Use

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. Cotton Council International (CCI) launched the U.S. Cotton Trust Protocol in order to meet these sustainability requirements. Industry analysts continue to monitor the rollout and how Indonesian importers and manufacturers are accepting the program.

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

## Vietnam

For the 2021 marketing year, Vietnam's cotton production was estimated to be 3 thousand bales with production estimates remaining unchanged for the 2022 crop at 3 thousand bales (Figure 98).

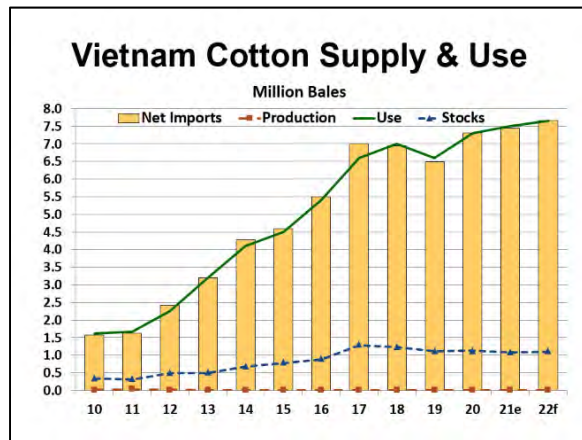


Figure 98 - Vietnam Cotton Supply & Use

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. The first disruption occurred in production during the first quarter (Q1) of 2020 when China went into lockdown, causing shortages of materials (fabrics and accessories). The second (and more serious) disruption in exports, started in Q2 2020 when COVID-19 spread to Vietnam's export destinations, including the United States and the EU. Around 60.0% of materials used in Vietnam's textile and garment production come from China with nearly the same amount of Vietnamese garment products destined for the United States and EU. As a result, these back-to-back disruptions badly affected Vietnam's textile and garment industry, resulting in the historic decline.

Furthermore, the ongoing worldwide container shortage crisis, resulting from COVID-19's negative effects on global trade, is the most recent disruption that Vietnam's textile and garment industry is facing. As mentioned above, Vietnam's textile and garment industry relies heavily on imports of raw materials, as well as exports of yarns and garment products. Trade flows are facing new challenges caused by the pandemic on global shipping, such as: 1) lack of available containers to ship products to key export markets, 2) sharp increases in ocean freight (defined as cost paid for the transportation of goods) and, 3) delays in shipments of raw materials and products for manufacturing and local consumption.

As China and Vietnam are among the few countries in Asia that have effectively controlled the pandemic, companies in these countries have resumed production and exports quicker than the rest of the world. However, many containers that have sailed from Asia to the United States and EU have faced delays in their return. Reduced U.S. and EU workforces have resulted in disruptions in production, inland transports, and the loading and unloading of containers at cargo depots and seaports. As a result, containers have piled up at seaports across the United States and EU and the loading/unloading and on/off boarding at these facilities is requiring additional weeks. Although this backlog has slowed the turnaround of containers, demand in China and Vietnam remains robust. The resulting imbalance between the supply and demand for containers has pushed freight up, particularly for shipments from Asia to the United States and EU. Media reports that impatient carriers are rushing containers (sometimes empty) back to Asia for their next sailings. This movement has accelerated the lack of containers and higher freight costs. Delays are also occurring in shipments for a variety of U.S. products to

Asia, including Vietnam. Contacts in the textile and garment industry confirmed increased delays in shipments of cotton from the United States to Vietnam and surging ocean freight since the third quarter of 2020, from \$2,000 per 40-foot container in October 2020 to a record high at \$10,000 per 40-foot container by early February 2021. The container shortage combined with higher freight costs has increased production costs, slowed down exports, caused large stocks in storage in warehouses, and affected cash flows.

Global demand for garment products remains uncertain due to the extended pandemic. 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 2021 marketing year mill use at 7.5 million bales. For the 2022 marketing year, consumption is expected to grow to 7.7 million bales.

Vietnam will remain a significant net importer for the foreseeable future. The United States has topped the list of cotton suppliers to Vietnam for nearly a decade. Brazil has emerged as a direct competitor of the United States and most spinners in Vietnam also use Brazilian cotton for their production. Brazil's exports of cotton to Vietnam have accelerated over the past five years. Meanwhile, Australia's cotton exports have dropped significantly in the past few years due to unfavorable weather conditions. For the 2021 marketing year, Vietnam's net imports were estimated to be 7.5 million bales and estimates are higher for the 2022 marketing year at 7.7 million bales.

## Bangladesh

Marketing year 2021 cotton production in Bangladesh totaled 151 thousand bales

(Figure 99). In Bangladesh, cotton farmers largely produce American Upland (*Gossypium hirsutum*) and Tree (*Gossypium arboreum*) cotton, which represent 95.0% and 5.0% of total production, respectively. Upland cotton is cultivated in northern, central, and southwestern regions of Bangladesh. Tree cotton is grown in three southeastern hill districts. With the help of the Government of Bangladesh's Cotton Development Board (CDB), farmers are slowly shifting from tobacco production to cotton production in some areas. Even with government support, a major constraint of local cotton cultivation continues to be the long growing seasons required for cotton (i.e., six months). Bangladeshi farmers, as a result of favorable growing conditions, are accustomed to rotating three crops in a year. Cotton cultivation is not widely popular in Bangladesh because it limits the farmers' ability to rotate multiple crops and take advantage of certain weather patterns. Production for the 2022 marketing year is expected to remain at 151 thousand bales.

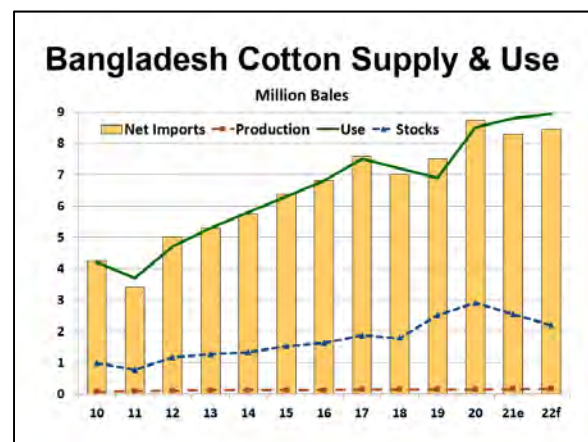


Figure 99 - Bangladesh Cotton Supply & Use

In terms of consumption, marketing year 2021 mill use was estimated at 8.8 million bales and an increase is expected in the 2022 marketing year with an estimate of 8.9 million bales.

As a result of increasing demand for quality cloth, raw cotton imports have steadily



grown. Net imports were estimated to be 8.3 million bales for the 2021 marketing year and are projected to increase in 2022 to roughly 8.4 million bales.

## U.S. Trade

For the 2021 marketing year, net U.S. exports of raw cotton are estimated to be 13.8 million bales (Figure 100). It was estimated that exports will constitute roughly 84.3% of total use for the 2021 marketing year.

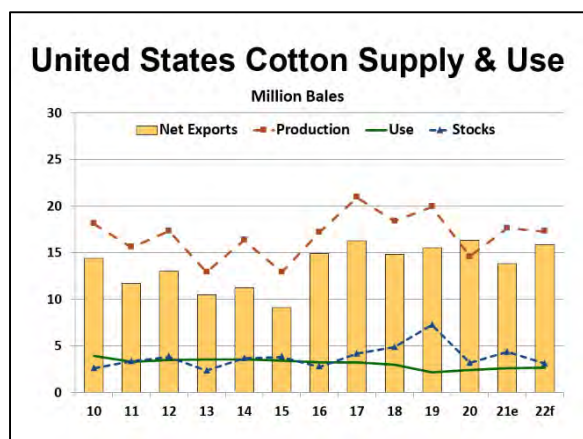


Figure 100 – U.S. Cotton Supply & Use

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

2010		2021YTD	
Country	(1,000 480-Lb. Bales)	Country	(1,000 480-Lb. Bales)
China	4,860	China	3,829
Turkey	2,076	Turkey	1,683
Mexico	1,244	Pakistan	1,624
Indonesia	889	Vietnam	1,457
Vietnam	717	Mexico	989
Thailand	712	Bangladesh	581

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 15.8 million bales is expected in the 2022 marketing year.

## World Trade

In the 2021 marketing year, world cotton trade climbed to roughly 46.3 million bales (Figure 102). Current projections put 2022 marketing year trade at 48.3 million bales. As previously discussed, U.S. net exports are projected to be 15.8 million bales in the 2022 marketing year.

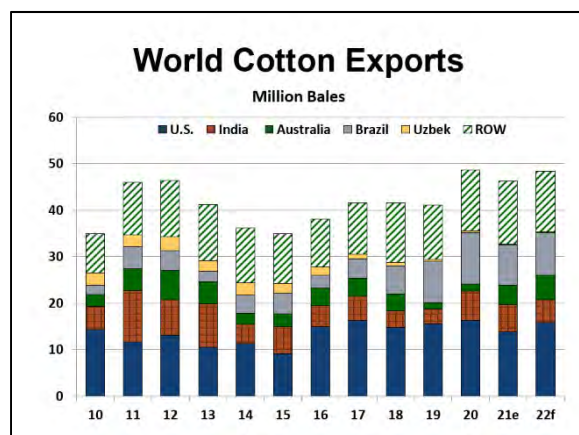


Figure 102 - World Cotton Exports

For 2022, cotton imports are projected to increase in most of the major cotton importing countries. (Figure 103).

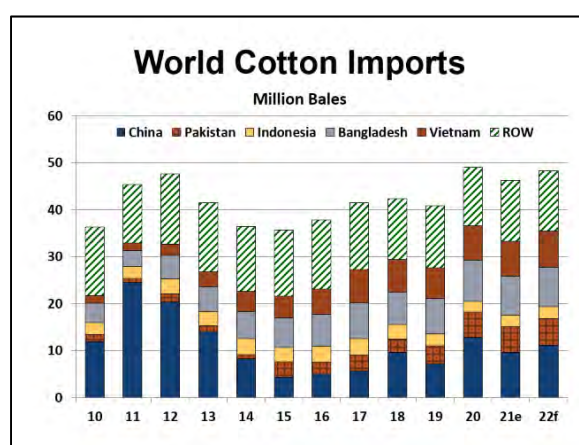


Figure 103 - World Cotton Imports

Examining the world trade-to-mill use ratio for the 2021 marketing year shows a decline to 37.3% from 40.5% in 2020 (Figure 104). For 2022, the ratio is expected to increase slightly to 38.4%.

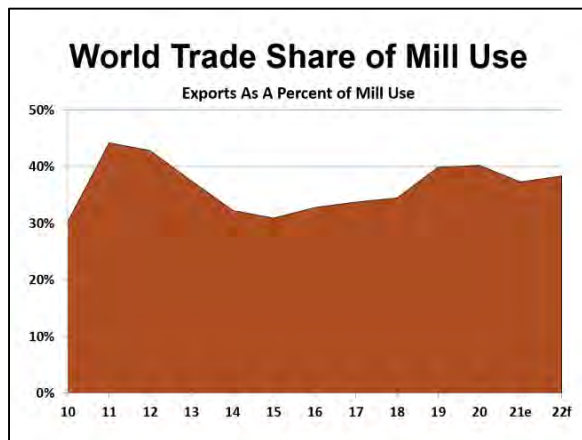


Figure 104 - World Trade Share of Mill Use

## World Ending Stocks

For the 2022 marketing year, ending stocks are estimated to fall to 81.6 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.

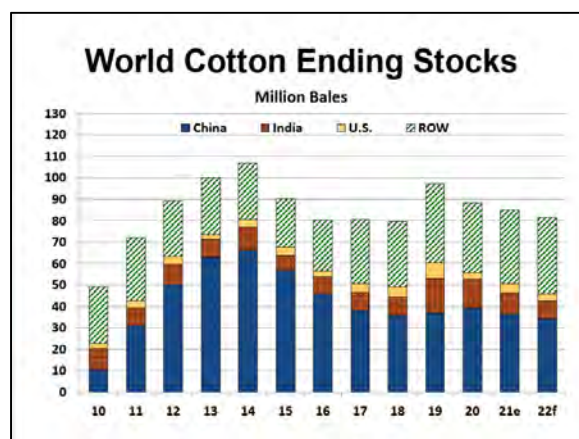


Figure 105 - World Cotton Ending Stocks

The projected world stocks-to-use ratio falls to 64.8% for the 2022 marketing year (Figure 106). As global stocks continue to fall, a stronger case can be made for an increase in prices.

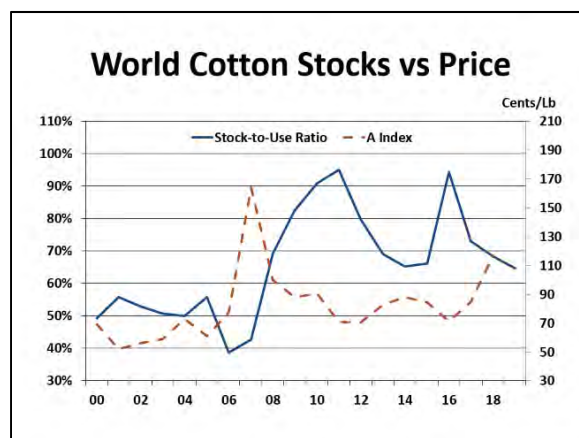


Figure 106 - World Cotton Stocks vs Price