

The Economic Outlook FOR U.S. COTTON 2020

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## Summary

This past year can be characterized as a year with significant uncertainty and volatility in the global economy and the world cotton market. The U.S.-China trade dispute continued to impact world trade in 2019. Now, in the early weeks of 2020, the spread of the coronavirus is creating a new round of risks and challenges. 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.

Overall, cotton futures prices traded lower in 2019 as compared to 2018. During the first four months of 2019, cotton futures prices traded in the 70 to 80 cent range. From April until the end of August, prices steadily declined to a low of 57 cents per pound, which is the lowest level since early 2016. Prices remained in the upper 50's until October before continuing on an upward trajectory, approaching 70 cents by the end of the year.

Despite the political uncertainties surrounding the Trump administration during 2019, the U.S. economy continued to expand, albeit at a slower rate than previous years. The long-running bull market is expected to continue into 2020 with further growth in the U.S. economy. However, current economic projections for the U.S. and global economies should be viewed with caution given the lack of clarity regarding the potential impacts of the coronavirus.

The latest USDA estimates for the 2019 U.S. crop are a good reminder that planted acreage is just one of the factors determining the supply of cotton and cottonseed. Although planted acreage declined to 13.7 million acres in 2019, production was estimated to be 20.1 million bales, which was 1.7 million bales higher than in 2018 due to lower abandonment. In 2019, U.S. abandonment was estimated to be 14.1%, much lower than the 2018 value of 27.6%.

In the Southwest, planted cotton acreage decreased by 830 thousand acres to 7.9 million acres in 2019. Texas producers planted 7.1 million acres in 2019 as compared to 7.8 million acres in 2018. However, since Texas abandonment declined from 43.9% in 2018 to 23.4% in 2019, harvested acreage increased by 1.1 million acres in 2019. Kansas area increased slightly to 175 thousand acres in 2019. Oklahoma's acreage declined to 640 thousand acres as compared to 780 thousand acres in 2018. In the last three years, cotton acreage in Kansas and Oklahoma has greatly expanded. For the 2019 crop year, Oklahoma had the 4th highest cotton acreage in the United States.

In the Southeast, 2019 acreage expanded slightly to 3.0 million acres. Acreage increased in Alabama, North Carolina, and Virginia and declined in Florida and Georgia. South Carolina acreage was unchanged in 2019. Mid-South acreage increased by 415 thousand acres to 2.4 million acres in 2019, while upland acreage in the West declined by 7 thousand acres.

In 2019, the estimated national average cotton yield of 817 pounds was 47 pounds lower than the previous year and 35 pounds lower than 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. The Southwest region had below average yields in 2019 while all other regions had above average yields.

In the Southwest, the 2019 average yield of 583 pounds was 165 pounds lower than

2018 and 143 pounds below the 5-year average. In Texas, the yield of 569 pounds was 187 pounds lower than 2018 and 149 pounds lower than the 5-year average. The Oklahoma yield of 640 pounds was 45 pounds higher than 2018. However, it was 146 pounds below the 5-year average. At 910 pounds, the Kansas yield was 167 pounds lower than the previous year and 135 pounds below the 5-year average.

In the Southeast, the 2019 yield for all states was higher than both 2018 and the 5-year average. For the region, the 2019 yield of 932 pounds was 172 pounds higher than 2018 and 72 pounds higher than the 5-year average. In Alabama, the 2019 yield of 969 was 111 pounds higher than 2018 and 69 pounds higher than the 5-year average. In Florida, the 2019 yield of 822 pounds was 290 pounds higher than in 2018 and slightly above the 5-year average.

The 2019 Georgia yield of 915 pounds was 196 pounds higher than 2018 and 53 pounds higher than the 5-year average. The 2019 North Carolina yield of 1,018 pounds was 206 pounds higher than 2018 and 160 pounds higher than the 5-year average. In South Carolina, the 2019 yield of 808 pounds was 75 pounds higher than 2018 and 26 pounds higher than the 5-year average. At 1,035 pounds, the 2019 Virginia yield was 140 pounds higher than 2018 and 82 pounds higher than the 5-year average.

The 2019 Mid-South yield of 1,134 pounds was just 18 pounds lower than the record 2018 yield and 32 pounds above the 5-year average. In Missouri, the 2019 yield of 1,330 pounds was the 2<sup>nd</sup> highest on record behind the 2018 yield. The 2019 Tennessee yield of 1,138 pounds was the highest on record for the state. In Arkansas, the 2019 yield of 1,102 pounds was 31 pounds lower than the previous year and 28 pounds lower than the 5-year average. The 2019 Louisiana yield of 1,031 pounds was 36 pounds lower than in 2018 and 48 pounds above the 5-year average. In Mississippi, the 2019 yield of 1,097 pounds was 44 pounds lower than the previous year and 29 pounds lower than the 5-year average.

The average upland yield in the West was estimated at 1,464 pounds, which was 18 pounds above the 5-year average and 112 pounds higher than 2018. The Arizona yield of 1,443 pounds was 29 pounds below the 5year average while the New Mexico yield of 1,328 pounds was 310 pounds above the 5year average and a new record. The California yield of 1,644 pounds was 265 pounds lower than the record 2018 yield and 40 pounds lower than the 5-year average.

The national average ELS yield was estimated at 1,544 pounds, relatively unchanged from 2018 and 116 pounds above the 5-year average. Accounting for the majority of ELS acres, California heavily influences the U.S. average. With an average yield of 1,616 pounds, the California yield was 46 pounds lower than the previous year and 78 pounds above the 5-year average. At 896 pounds, ELS yields in Arizona were 32 pounds below the 5-year average. New Mexico's yield of 864 pounds was 13 pounds above the 5-year average. The 2019 Texas ELS yield of 912 pounds was slightly lower than 2018 and the 5-year average.

With 18.3 million running bales classed through February 6, color grades for the 2019 crop were generally lower than previous years. In total for the Cotton Belt, 76.4% of the 2019 crop was grading 41 or better as compared to the 5-year average of 83.5%. The Southeast region was the only region that did not fall below the respective five-year average in terms of color. In the Southeast, 81.3% of the 2019 crop was grading 41 or better. At 87.7%, the Mid-South was slightly behind the 5-year average of 89.1%. The Southwest had the lowest percentage grading 41 or better with 62.4% of the 2019 crop. In the West, 88.0% of the 2019 crop was grading 41 or better.

The current marketing year began with cotton stocks at 4.9 million bales. When added to the recent harvest, total supplies for the 2019 marketing year are estimated at 25.0 million bales. Total supplies will be more than sufficient to satisfy estimated use of 19.5 million bales. According to the February USDA estimates, U.S. exports for the 2019 crop year are currently estimated at 16.5 million bales.

U.S. textile mills are expected to consume 3.00 million bales in the current marketing year. 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.

As we look ahead to the 2020 planting season, several factors will influence U.S. acreage decisions, including market price changes, weather events, and general agronomic conditions. The 2018 Farm Bill provides a measure of stability for cotton producers with the continuation of the seed cotton PLC/ARC program.

On January 15, 2020, President Trump signed the Phase 1 trade agreement with China. As part of the agreement, China has agreed to purchase an average of \$40 billion in U.S. agricultural commodities, including cotton, over the next two years. However, the overall impact for cotton remains uncertain as commodity specific details have not been released. As a result, trade uncertainty will continue to impact the cotton market in 2020.

While the Phase 1 trade agreement has provided some renewed optimism for an improvement in world economic conditions, the China coronavirus epidemic in the early weeks of 2020 has created market disruptions, adding uncertainty in commodity markets. In the last few weeks, the outbreak of the coronavirus has contributed to a significant drop in commodity prices. For example, crude oil prices dropped from \$60 per barrel in mid-January to \$50 per barrel in early February.

The market disruptions could delay China's ability to increase purchases in the near-term as part of the Phase 1 trade agreement. As a result, the potential impacts of the coronavirus epidemic represent a significant wildcard in the outlook for the world cotton market in the 2020 crop year.

During the first four months of the 2019 marketing year, the December 2020 futures contract was trading in the mid to upper 60's. Prices steadily declined from May to September, reaching a low of 61 cents on September 3. Since reaching that low point, prices trended upward reaching 72 cents by the end of January. As compared to a year ago, futures prices are trading a few cents lower. At this time last year, the December 2019 contract was trading in the 74-75 cent range. In early February, prices dropped to 68 cents as concerns intensified regarding the spread of the coronavirus.

Corn prices traded in a sideways pattern during the first half of 2019 and followed a downward trend during the last half of the year. In mid-January, the December 2020 contract was trading at \$4.04 per bushel, which is the same level as a year ago. In early February, prices dropped to \$3.92 per bushel.

Soybean futures prices experienced some volatility in 2019, with a range of \$8.88 to \$9.81. In mid-January, the November 2020 contract traded at \$9.70 per bushel, almost the same level as the November 2019 contract was trading a year earlier. In early February, prices dropped to \$9.18 per bushel.

A critical component of the economic outlook is the NCC's annual planting intentions survey. The 2020 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 2019 and intended acreage for 2020. 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 average futures prices in the first quarter of 2019, average soybean prices during the 2020 survey period (December 15 – January 15) were up by 2.6%, corn prices were trading about 0.8% higher, and cotton prices were trading 4.3% lower. As a result, relative price ratios of cotton to corn and cotton to soybeans presented slightly less favorable planting incentives when compared to 2019.

It is important to call attention to the relative price 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. A decrease in the price ratios generally indicates a decrease in cotton acreage.

For the 2020 crop year, corn, soybeans, and wheat are expected to provide modestly more competition for cotton acres. A review of the Council's survey will begin with a look at the Southeast.

In the Southeast, survey results indicate a 9.3% decrease in the region's upland area to

2.7 million acres, with all states showing a decline in acreage. In Alabama, the survey responses indicate a 4.9% decrease in cotton acreage, an increase in corn and soybeans and a decline in 'other crops'. In Florida, respondents indicated slightly less cotton, soybeans, and 'other crops', likely peanuts, and more corn. In Georgia, cotton acreage is expected to decline by 11.9% to 1.2 million acres. Georgia growers expect to plant more corn, wheat, and 'other crops', likely peanuts, and less soybeans. In North Carolina, an 8.4% decline in cotton acreage is expected. Acreage of corn, wheat, and soybeans is expected to increase while 'other crops' is expected to decline. In South Carolina, acreage is expected to decline by 10.7%. South Carolina growers expect to plant more corn, soybeans, wheat, and 'other crops'. Cotton acreage is expected to decline by 3.6% in Virginia. Virginia growers intend to plant more corn and 'other crops' and less soybeans and wheat.

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 2.2 million acres, a decline of 6.5% from the previous year. Survey results suggest that the decrease in cotton acres can be attributed to a shift to corn and soybeans.

Across the region, all states intend to decrease cotton acreage. Arkansas producers intend to plant 3.0% less cotton acreage and increase corn, wheat, and 'other crops'. Soybean acreage is expected to remain relatively unchanged from 2019. Louisiana growers expect to plant 6.4% less cotton acreage in 2020 and plant more corn, soybeans and 'other crops'. In Mississippi, respondents expect to plant 8.9% less cotton. Mississippi respondents expect to increase corn and soybean acreage and reduce 'other crops'. Missouri growers expect to decrease cotton acres by 2.1% and plant more corn, and less soybeans. In Tennessee, cotton acreage is expected to decline by 11.8% as land shifts to corn, soybeans and wheat. All states in the Mid-South intend to plant more corn in 2020. Soybean acreage is expected to increase in Louisiana, Mississippi, and Tennessee.

Growers in the Southwest intend to plant 7.6 million acres of cotton, a decrease of 3.4%. Increases in cotton area are expected in Oklahoma and Kansas and a decline is expected in Texas. In Kansas, producers intend to plant 5.1% more cotton acres in 2020, with respondents indicating less corn and soybeans. In Oklahoma, a 3.3% increase in cotton acreage is expected. Oklahoma producers expect to plant slightly more wheat and less 'other crops'. Overall, Texas acreage is expected to decline by 4.2%. In south Texas, respondents indicate a 10.4% decrease in cotton acreage. South Texas growers intend to plant more corn and 'other crops', likely sorghum, and less wheat. Respondents from the Blacklands indicate a decrease of 8.3% in cotton acreage, an increase in corn acreage and 'other crops', and a decrease in wheat acreage. In West Texas, respondents indicated a 3.0% decrease in cotton acreage, an increase in corn and wheat, and a slight decrease in 'other crops'.

With intentions of 221 thousand acres, producers in the West expect to plant 20.5% less acres of upland cotton. Cotton acreage is expected to decrease in Arizona and California and increase slightly in New Mexico. The survey results for Arizona suggest a 25.7% decrease in upland cotton acres and an increase in corn, wheat, and 'other crops'. In California, growers intend to plant 30.9% less upland cotton and reduce acreage of corn and wheat. California producers expect to increase acreage of 'other crops'. Summing across the 4 regions gives intended 2020 upland cotton area of 12.8 million acres, 5.6% below 2019.

The survey indicates that growers intend to plant slightly less ELS cotton in 2020. California growers expect to plant 3.9% less ELS cotton, while Arizona growers expect to plant 1.8% less ELS cotton. New Mexico acreage is expected to remain unchanged while Texas growers expect to increase ELS acreage by 15.5%. Overall, U.S. cotton growers intend to plant 224 thousand ELS acres in 2020. Summing together the upland and ELS cotton intentions shows U.S. allcotton plantings in 2020 of 13.0 million acres, 5.5% lower than in 2019.

Based on the current prices of cotton and cottonseed, total revenue is expected to fall short of total costs. In recent years, U.S. cotton producers have struggled with low cotton prices, high production costs, and the resulting financial hardships. Many producers continue to face difficult economic conditions heading into 2020. Production costs remain high and prices are not high enough to cover all production expenses for many producers. While the Market Facilitation Program has provided some compensation to producers for the reduction in prices due to trade disruptions, the 2019 crop year has still been a very challenging year for many growers across the Cotton Belt. In addition, the most recent dip in commodity prices falls during the 2020 crop insurance price discovery period for a large portion of the Cotton Belt, which lowers the insurance guarantees.

Despite these challenges, cotton is still the better alternative for many growers. Based on current prices, projected cotton returns are currently more favorable than some competing commodities. Improved seed varieties continue to increase yield potential and improve the viability of cotton. In the West, expected water availability may be influencing cotton acreage decisions. Planted acreage is just one of the factors that will determine 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.

With average abandonment for the U.S. estimated at 13.8%, Cotton Belt harvested area totals 11.2 million acres. Using an average 2020 U.S. yield of 848 generates a cotton crop of 19.8 million bales, with 19.1 million bales of upland and 675 thousand bales of ELS.

Combining projected production with expected beginning stocks of 5.4 million bales and imports of 5 thousand bales gives a total U.S. supply of 25.2 million bales. This is an increase of 205 thousand bales from the 2019 level. Cottonseed production is estimated to decrease to 6.1 million tons in the 2020 marketing year. With 421 thousand tons of beginning stocks, 2020 cottonseed supply totals 6.5 million tons.

NCC projects domestic mill use of cotton at 2.85 million bales for the 2020 marketing year, slightly below the 2019 USDA estimate of 3.00 million bales. 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.

On January 29, 2020, President Trump signed the U.S.-Mexico-Canada Agreement (USMCA) into law. The USMCA includes some important provisions that should help boost the U.S. textile industry. However, while the U.S. and Mexico have approved the USMCA, Canada has only recently started its ratification process and is expected to conclude in the next few months. It is unlikely the USMCA will enter into force prior to July 1, 2020.

Now, we will turn our attention to the world market with a review of 2019 and then discuss prospects for the 2020 marketing year.

One of the most challenging issues facing the global cotton market has been the uncertainty surrounding the ongoing trade tensions between the U.S. and China. In mid-January, the two countries signed Phase 1 of the U.S.-China trade agreement.

World cotton production increased in 2019 to an estimated 121.3 million bales due to higher acreage. As compared to 2018, India's crop increased by 3.7 million bales in 2019 while China's 2019 crop declined by 500 thousand bales. Australia's 2019 production was estimated to be 675 thousand bales, which was the lowest level in twelve years. Pakistan's production was estimated to be 6.6 million bales in 2019, which is the lowest level since the 1994 crop year. Turkey's 2019 production was 300 thousand bales lower than 2018. Brazil's 2019 estimated production of 12.7 million bales was slightly below the record level in 2018.

World consumption is expected to be 119.0 million bales in the 2019 marketing year. Estimates have been revised downward due to the ongoing trade dispute, a slowdown in the Chinese and world economies, and disruptions to manufacturing and trade due to the coronavirus outbreak. China is projected to consume 37.5 million bales in 2019. The gap between China's cotton consumption and production is currently

10.3 million bales. From 2015-2018, the gap was filled with reserve sales and a small level of imports. In the last five years, China reduced their total ending stocks from 66.4 million bales in the 2014 marketing year to an estimated 33.7 million bales in the 2019 marketing year, which is now considered to be a normal or maintainable level.

China's ending stocks include state reserve stocks and free stocks. From 2012 to 2017, the majority of total ending stocks were state-owned reserve stocks. China is now purchasing cotton to rotate the reserve stocks. For the 2019 crop year, China is expected to import 8.5 million bales, which is 1.1 million bales lower than in 2018. The drop in imports is in part due to the decline in mill use resulting from the trade restrictions of the U.S.-China dispute.

Prior to the implementation of tariffs, the U.S. was in a prime position to capitalize on the increase in Chinese cotton imports. In the absence of retaliatory tariffs, China was expected to purchase more U.S. cotton in the 2018 and 2019 marketing years as a result of declining stockpiles and larger gap between China's domestic production and consumption.

With the imposition of the 25% tariff, China has turned to other suppliers during the 2018 and 2019 marketing years. The U.S.-China trade dispute has allowed Brazil, Australia, and other countries to gain market share. For the past decade, China has 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. For China, cotton imports from the U.S., Australia, and Brazil are comparable since the cotton is machine-picked and of higher quality. In the 2017 marketing year, the average market share of Chinese imports

from the U.S., Australia, and Brazil was 45.0%, 22.7%, and 6.7%, respectively.

For the 2018 marketing year, the share of Chinese imports from the U.S., Australia, and Brazil was 17.7%, 26.5%, and 22.7%, respectively. Based on the current level of sales commitments, U.S. exports to China are projected to increase to 2.0 million bales in the 2019 crop year as compared to 1.6 million bales in 2018. This would result in a slight increase in the U.S. market share of Chinese imports to 23.0%. While an improvement from the previous marketing year, the ongoing trade restrictions are keeping U.S. market share below historical averages.

Based on the February 2020 USDA estimates, U.S. exports are projected to reach 16.5 million bales in the 2019 marketing year. Despite the continued U.S.-China trade disruptions, U.S. export sales have been relatively strong for the 2019 crop year, particularly to markets such as Vietnam, Pakistan and Turkey. Sales reached the highest level in the marketing year during the week ending January 23. Weekly shipments reached a marketing year high of 437 thousand bales during the week ending January 30. As of January 30, total commitments reached 13.7 million bales while 5.8 million bales have been shipped. Current commitments and shipments are at the highest level at this point in the marketing year since the 2010 crop year. While export competition from Brazil remains strong, the U.S. has had increased opportunities for export sales to other markets in the 2019 crop year. Lower production in Australia, Pakistan, and Turkey has led to higher export sales.

During the 2019 crop year, the Indian government has increased purchases of Indian cotton under the Minimum Support Price (MSP) program resulting in less cotton available to export. As of the end of January 2020, the Indian government had purchased 3.7 million bales under the MSP program.

Uzbekistan has drastically reduced cotton exports in 2018 and 2019 and recently announced a ban on cotton exports starting with the 2020 calendar year. From 2005 to 2015, Uzbekistan exported an average of 3.2 million bales per year. Uzbekistan cotton acreage has been declining in the last few years as the government has removed land from low-yielding cotton areas and switched to higher value crops. Starting with the 2020 crop year, the Uzbekistan government plans to maintain cotton acreage at 2.5 million acres for the next five years. With the expansion of the Uzbekistan textile industry, Uzbekistan mill use has been rapidly expanding and domestic cotton production is now entirely consumed by domestic mills. A further expansion of the Uzbekistan textile industry will require Uzbekistan to increase cotton production or become a cotton importer, which is an interesting dynamic since Uzbekistan has not previously imported raw cotton.

World trade is projected to be higher in the 2019 marketing year and the U.S. will remain the largest exporter of cotton with a projected market share of 37.9%, as compared to 35.7% in 2018.

World consumption is expected to be lower than world production in the 2019 marketing year. Ending stocks are projected to increase by 2.1 million bales to 82.1 million bales with a stocks-to-use ratio of 69.0%. Chinese stocks are projected to decrease by 1.9 million bales in 2019. Stocks outside of China are projected to increase in 2019 by 4.1 million bales to 48.4 million bales, which is a record level of stocks.

For the 2020 marketing year, world area is projected to decline by 2.8% to 82.8 million acres in response to the slight decline in cotton prices. World production is estimated to decline by 2.4 million bales in 2020 to 118.9 million bales due to lower area. World mill use is projected to increase to 120.7 million bales for the 2020 crop year, while world trade is estimated to increase to 44.8 million bales.

China is expected to increase mill use in 2020 to 37.9 million bales, with the increase in part due to increased access to imported cotton under the Phase 1 trade agreement. However, the projected increase may not materialize if economic growth continues to slowdown due to the coronavirus outbreak. Lower-priced manmade fibers are also providing strong competition for cotton demand.

China's imports are expected to increase in the 2020 crop year to 9.1 million bales. The deficit between domestic production and consumption along with lower reserve stocks contribute to the increased trade position. Additional imports are also supported by the implementation of the Phase 1 agreement. However, the increased imports do not eliminate the need to drawdown inventories as Chinese stocks are projected to fall by 2.6 million bales during the 2020 marketing year to 31.1 million bales. If realized, stocks would be down 35.3 million bales from the 2014 peak. World ending stocks are projected to decline by 2.0 million bales in the 2020 marketing year to 80.1 million bales, resulting in a stocks-to-use ratio of 66.4%.

For the U.S. balance sheet, exports in the 2020 marketing year are projected to drop slightly to 16.4 million bales. While China is expected to increase purchases of U.S. cotton under the Phase 1 trade agreement, this outlook assumes a somewhat conservative estimate due to the lack of commodity-specific detail in the agreement. In addition, the U.S. will continue to face increased export competition from Brazil. For this outlook, the U.S. is assumed to

export 2.5 million bales to China in the 2020 crop year as compared to an estimated 2.0 million bales in the 2019 crop year. This would represent 27.5% of the projected 9.1 million bales of Chinese cotton imports, which is still well below the pre-trade war level. If the U.S. export projection of 16.4 million bales is realized, the U.S. share of world exports would be 36.6%, which is slightly lower than the 2018 share.

When combined with 2.85 million bales of U.S. mill use, total offtake falls short of expected production and ending stocks are projected at 5.9 million bales. In absolute terms, stocks would be the highest since the end of the 2008 marketing year, with a stocks-to-use ratio of 30.4%.

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. Although, cotton prices were weaker in 2019 as compared to 2018, prices had improved at the end of 2019 and in early 2020 prior to the coronavirus outbreak.

However, the resulting global balance sheet, stable stocks outside of China, increased export competition from Brazil, recovery in Australia's production, and low manmade fiber prices will have a bearish influence on cotton prices. A quick containment of the coronavirus and a successful implementation of the Phase 1 trade agreement would provide some price support.

As with any projections, there are uncertainties and unknowns that can change the outcome. For the coming year, key factors affecting the U.S. cotton industry will be the implementation of the Phase 1 trade agreement and impacts of the coronavirus. China has reduced their reserve stocks and is expected to import more cotton in the 2020 marketing year as China continues to rotate the reserve stocks.

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. World stocks are declining, and world production will eventually have to increase to maintain pace with consumption.

The complete 2020 Annual Outlook can be found on the NCC website at http://www.cotton.org/econ/reports/annua l-outlook.cfm.

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

|                             |         |         |         |         | -       |         |
|-----------------------------|---------|---------|---------|---------|---------|---------|
| World                       | 15/16   | 16/17   | 17/18   | 18/19   | 19/20   | 20/21   |
| Harvested Area (Thou Acres) | 75,988  | 73,663  | 83,327  | 82,724  | 85,198  | 82,837  |
| Yield (Pounds/Acre)         | 607     | 695     | 713     | 688     | 684     | 689     |
| Production (Thou Bales)     | 96,163  | 106,677 | 123,779 | 118,603 | 121,329 | 118,944 |
| Trade (Thou Bales)          | 35,444  | 37,697  | 41,160  | 42,203  | 43,548  | 44,780  |
| Mill Use (Thou Bales)       | 113,232 | 116,177 | 122,761 | 120,189 | 119,013 | 120,667 |
| Ending Stocks (Thou Bales)  | 90,149  | 80,288  | 80,835  | 79,987  | 82,120  | 80,107  |
| United States               | 15/16   | 16/17   | 17/18   | 18/19   | 19/20   | 20/21   |
| Harvested Area (Thou Acres) | 8,075   | 9,508   | 11,100  | 10,205  | 11,804  | 11,180  |
| Yield (Pounds/Acre)         | 766     | 867     | 905     | 864     | 817     | 848     |
| Production (Thou Bales)     | 12,888  | 17,170  | 20,923  | 18,367  | 20,102  | 19,757  |
| Net Exports (Thou Bales)    | 9,120   | 14,910  | 16,276  | 14,760  | 16,495  | 16,401  |
| Mill Use (Thou Bales)       | 3,450   | 3,250   | 3,225   | 2,975   | 3,000   | 2,850   |
| Ending Stocks (Thou Bales)  | 3,800   | 2,750   | 4,200   | 4,850   | 5,400   | 5,857   |
| Australia                   | 15/16   | 16/17   | 17/18   | 18/19   | 19/20   | 20/21   |
| Harvested Area (Thou Acres) | 771     | 1,433   | 1,310   | 939     | 148     | 400     |
| Yield (Pounds/Acre)         | 1,774   | 1,356   | 1,759   | 1,125   | 2,185   | 1,640   |
| Production (Thou Bales)     | 2,850   | 4,050   | 4,800   | 2,200   | 675     | 1,367   |
| Net Exports (Thou Bales)    | 2,828   | 3,731   | 3,915   | 3,632   | 1,300   | 1,367   |
| Mill Use (Thou Bales)       | 35      | 35      | 35      | 35      | 35      | 35      |
| Ending Stocks (Thou Bales)  | 1,880   | 2,189   | 3,039   | 1,572   | 912     | 876     |
| Bangladesh                  | 15/16   | 16/17   | 17/18   | 18/19   | 19/20   | 20/21   |
| Harvested Area (Thou Acres) | 106     | 106     | 109     | 109     | 111     | 109     |
| Yield (Pounds/Acre)         | 538     | 565     | 596     | 609     | 604     | 594     |
| Production (Thou Bales)     | 119     | 125     | 135     | 138     | 140     | 135     |
| Net Imports (Thou Bales)    | 6,375   | 6,800   | 7,600   | 6,900   | 7,200   | 7,322   |
| Mill Use (Thou Bales)       | 6,300   | 6,800   | 7,500   | 7,300   | 7,300   | 7,410   |
| Ending Stocks (Thou Bales)  | 1,515   | 1,630   | 1,855   | 1,583   | 1,613   | 1,650   |
| Brazil                      | 15/16   | 16/17   | 17/18   | 18/19   | 19/20   | 20/21   |
| Harvested Area (Thou Acres) | 2,360   | 2,323   | 2,903   | 4,052   | 4,077   | 4,159   |
| Yield (Pounds/Acre)         | 1,204   | 1,451   | 1,524   | 1,540   | 1,495   | 1,502   |
| Production (Thou Bales)     | 5,920   | 7,020   | 9,220   | 13,000  | 12,700  | 13,017  |
| Net Exports (Thou Bales)    | 4,223   | 2,600   | 4,092   | 6,001   | 8,875   | 9,548   |
| Mill Use (Thou Bales)       | 3,100   | 3,200   | 3,400   | 3,400   | 3,400   | 3,450   |
| Ending Stocks (Thou Bales)  | 5,709   | 6,929   | 8,657   | 12,256  | 12,681  | 12,700  |
| China                       | 15/16   | 16/17   | 17/18   | 18/19   | 19/20   | 20/21   |
| Harvested Area (Thou Acres) | 7,537   | 7,166   | 8,401   | 8,649   | 8,525   | 8,184   |
| Yield (Pounds/Acre)         | 1,401   | 1,524   | 1,571   | 1,540   | 1,534   | 1,542   |
| Production (Thou Bales)     | 22,000  | 22,750  | 27,500  | 27,750  | 27,250  | 26,297  |
| Net Imports (Thou Bales)    | 4,278   | 4,971   | 5,574   | 9,427   | 8,325   | 8,957   |
| Mill Use (Thou Bales)       | 36,000  | 38,500  | 41,000  | 39,500  | 37,500  | 37,900  |
| Ending Stocks (Thou Bales)  | 56,698  | 45,919  | 37,993  | 35,670  | 33,745  | 31,100  |
| India                       | 15/16   | 16/17   | 17/18   | 18/19   | 19/20   | 20/21   |
| Harvested Area (Thou Acres) | 30,393  | 26,810  | 31,135  | 31,135  | 32,123  | 31,159  |
| Yield (Pounds/Acre)         | 409     | 483     | 447     | 398     | 441     | 429     |
| Production (Thou Bales)     | 25,900  | 27,000  | 29,000  | 25,800  | 29,500  | 27,820  |
| Net Exports (Thou Bales)    | 4,692   | 1,814   | 3,505   | 1,711   | 1,300   | 2,759   |
| Mill Use (Thou Bales)       | 24,750  | 24,350  | 24,150  | 24,000  | 24,500  | 24,875  |
| Ending Stocks (Thou Bales)  | 7,044   | 7,880   | 9,225   | 9,314   | 13,014  | 13,200  |

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

| Indonesia                   | 15/16  | 16/17  | 17/18  | 18/19  | 19/20  | 20/21  |
|-----------------------------|--------|--------|--------|--------|--------|--------|
| Harvested Area (Thou Acres) | 7      | 7      | 7      | 7      | 7      | 5      |
| Yield (Pounds/Acre)         | 324    | 324    | 194    | 194    | 194    | 246    |
| Production (Thou Bales)     | 5      | 5      | 3      | 3      | 3      | 3      |
| Net Imports (Thou Bales)    | 2,926  | 3,386  | 3,512  | 3,045  | 3,045  | 3,217  |
| Mill Use (Thou Bales)       | 3,000  | 3,300  | 3,500  | 3,150  | 3,050  | 3,150  |
| Ending Stocks (Thou Bales)  | 528    | 619    | 634    | 532    | 530    | 600    |
| Mexico                      | 15/16  | 16/17  | 17/18  | 18/19  | 19/20  | 20/21  |
| Harvested Area (Thou Acres) | 329    | 257    | 519    | 600    | 556    | 550    |
| Yield (Pounds/Acre)         | 1,377  | 1,429  | 1,443  | 1,387  | 1,355  | 1,400  |
| Production (Thou Bales)     | 943    | 765    | 1,560  | 1,735  | 1,570  | 1,604  |
| Net Imports (Thou Bales)    | 844    | 850    | 575    | 350    | 375    | 464    |
| Mill Use (Thou Bales)       | 1,850  | 1,750  | 1,900  | 1,950  | 1,950  | 2,000  |
| Ending Stocks (Thou Bales)  | 605    | 445    | 655    | 765    | 735    | 675    |
| Pakistan                    | 15/16  | 16/17  | 17/18  | 18/19  | 19/20  | 20/21  |
| Harvested Area (Thou Acres) | 7,166  | 6,178  | 6,672  | 5,683  | 6,178  | 5,930  |
| Yield (Pounds/Acre)         | 469    | 598    | 590    | 642    | 513    | 550    |
| Production (Thou Bales)     | 7,000  | 7,700  | 8,200  | 7,600  | 6,600  | 6,795  |
| Net Imports (Thou Bales)    | 3,050  | 2,325  | 3,240  | 2,790  | 4,100  | 4,260  |
| Mill Use (Thou Bales)       | 10,300 | 10,300 | 10,900 | 10,700 | 10,800 | 10,800 |
| Ending Stocks (Thou Bales)  | 2,615  | 2,315  | 2,830  | 2,495  | 2,370  | 2,600  |
| Turkey                      | 15/16  | 16/17  | 17/18  | 18/19  | 19/20  | 20/21  |
| Harvested Area (Thou Acres) | 914    | 988    | 1,161  | 1,285  | 1,384  | 1,245  |
| Yield (Pounds/Acre)         | 1,391  | 1,554  | 1,653  | 1,382  | 1,179  | 1,432  |
| Production (Thou Bales)     | 2,650  | 3,200  | 4,000  | 3,700  | 3,400  | 3,715  |
| Net Imports (Thou Bales)    | 3,987  | 3,345  | 3,699  | 3,017  | 3,750  | 3,791  |
| Mill Use (Thou Bales)       | 6,700  | 6,550  | 7,450  | 6,900  | 7,200  | 7,300  |
| Ending Stocks (Thou Bales)  | 1,533  | 1,528  | 1,777  | 1,594  | 1,544  | 1,750  |
| Uzbekistan                  | 15/16  | 16/17  | 17/18  | 18/19  | 19/20  | 20/21  |
| Harvested Area (Thou Acres) | 3,175  | 2,916  | 3,089  | 2,718  | 2,595  | 2,569  |
| Yield (Pounds/Acre)         | 574    | 613    | 600    | 578    | 648    | 626    |
| Production (Thou Bales)     | 3,800  | 3,725  | 3,860  | 3,275  | 3,500  | 3,348  |
| Net Exports (Thou Bales)    | 2,200  | 1,750  | 1,000  | 750    | 300    | 0      |
| Mill Use (Thou Bales)       | 1,800  | 2,000  | 2,500  | 2,800  | 3,300  | 3,457  |
| Ending Stocks (Thou Bales)  | 1,098  | 1,073  | 1,433  | 1,158  | 1,058  | 949    |
| Vietnam                     | 15/16  | 16/17  | 17/18  | 18/19  | 19/20  | 20/21  |
| Harvested Area (Thou Acres) | 2      | 2      | 2      | 2      | 2      | 2      |
| Yield (Pounds/Acre)         | 583    | 583    | 583    | 583    | 583    | 583    |
| Production (Thou Bales)     | 3      | 3      | 3      | 3      | 3      | 3      |
| Net Imports (Thou Bales)    | 4,600  | 5,500  | 7,000  | 6,900  | 6,800  | 7,106  |
| Mill Use (Thou Bales)       | 4,500  | 5,400  | 6,600  | 7,000  | 6,800  | 7,100  |
| Ending Stocks (Thou Bales)  | 779    | 882    | 1,285  | 1,188  | 1,191  | 1,200  |
| West Africa                 | 15/16  | 16/17  | 17/18  | 18/19  | 19/20  | 20/21  |
| Harvested Area (Thou Acres) | 6,434  | 7,047  | 7,349  | 7,277  | 7,509  | 7,472  |
| Yield (Pounds/Acre)         | 313    | 350    | 355    | 358    | 375    | 365    |
| Production (Thou Bales)     | 4,200  | 5,142  | 5,439  | 5,422  | 5,866  | 5,682  |
| Net Exports (Thou Bales)    | 4,553  | 4,605  | 5,060  | 5,548  | 5,603  | 5,652  |
| Mill Use (Thou Bales)       | 131    | 135    | 135    | 140    | 138    | 140    |
| Will Ose (Thou Dales)       |        |        |        |        |        |        |

|                | 2019 Actual<br>(Thou.) 1/ | 2020 Intended<br>(Thou.) 2/ | Percent Change |
|----------------|---------------------------|-----------------------------|----------------|
| SOUTHEAST      | 2,965                     | 2,690                       | -9.3%          |
| Alabama        | 540                       | 513                         | -4.9%          |
| Florida        | 112                       | 110                         | -2.2%          |
| Georgia        | 1,400                     | 1,233                       | -11.9%         |
| North Carolina | 510                       | 467                         | -8.4%          |
| South Carolina | 300                       | 268                         | -10.7%         |
| Virginia       | 103                       | 99                          | -3.6%          |
| MID-SOUTH      | 2,400                     | 2,244                       | -6.5%          |
| Arkansas       | 620                       | 601                         | -3.0%          |
| Louisiana      | 280                       | 262                         | -6.4%          |
| Mississippi    | 710                       | 647                         | -8.9%          |
| Missouri       | 380                       | 372                         | -2.1%          |
| Tennessee      | 410                       | 362                         | -11.8%         |
| SOUTHWEST      | 7,865                     | 7,598                       | -3.4%          |
| Kansas         | 175                       | 184                         | 5.1%           |
| Oklahoma       | 640                       | 661                         | 3.3%           |
| Texas          | 7,050                     | 6,753                       | -4.2%          |
| WEST           | 278                       | 221                         | -20.5%         |
| Arizona        | 160                       | 119                         | -25.7%         |
| California     | 55                        | 38                          | -30.9%         |
| New Mexico     | 63                        | 64                          | 1.7%           |
| TOTAL UPLAND   | 13,508                    | 12,753                      | -5.6%          |
| TOTAL ELS      | 230                       | 224                         | -2.7%          |
| Arizona        | 8                         | 7                           | -1.8%          |
| California     | 205                       | 197                         | -3.9%          |
| New Mexico     | 5                         | 5                           | 0.0%           |
| Texas          | 12                        | 14                          | 15.5%          |
| ALL COTTON     | 13,738                    | 12,977                      | -5.5%          |

## Table 2 - Prospective 2020 U.S. Cotton Area