Summary

This past year can be characterized as a year with significant uncertainty and volatility in the global economy and the world cotton market. 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. It should be noted that data from the U.S. Department of Agriculture (USDA) and other government agencies provide the basis for the projections. With the absence of some publications due the government shutdown, this outlook incorporates the latest government estimates available as of late January with adjustments based on industry and other feedback.

In the first half of 2018, cotton futures prices trended upward, reaching a high of 95 cents/lb. in mid-June. Cotton prices were at the highest level in four years and had strengthened relative to competing crops. U.S. producers responded accordingly by planting more cotton in 2018. Despite the political turmoil under the Trump administration, expansion in the U.S. economy was continuing at a strong pace. Oil prices strengthened to $71 per barrel by July, which was the highest level since November 2014.

Following the announcement of the first Chinese tariff list by President Trump on June 14, China immediately responded by announcing a 25% tariff on imports of selected U.S. goods, which included cotton. From June 12 to July 5, the nearby NY futures contract dropped by 12 cents to 83 cents/lb. Cotton prices bounced back in August but followed a downward trend throughout the remainder of 2018. Oil prices remained relatively stable at close to $71 per barrel from July to November until prices sharply declined to $57 per barrel at the end of the year.

As we review the latest estimates for the 2018 U.S. crop, this year was a good reminder that planted acreage is just one of the factors determining the supply of cotton and cottonseed. While planted acreage increased to 14.0 million acres in 2018, production is estimated to be 18.7 million bales, which is 2.2 million bales lower than 2017. Various weather events, including drought, hurricanes, and harvest-time rainfall, resulted in large disruptions to the 2018 growing and harvest season.

In the Southwest, cotton acreage increased to 8.6 million acres, the highest level since 1980. With the exception of the 1980 crop year, the Southwest acreage has not been above 8.6 million acres since the 1950’s. The highest level in recent years was 8.0 million acres in 2011, with Texas planting 7.6 million acres. Texas producers planted 7.7 million acres in 2018. Oklahoma’s acreage expanded by 33.3% to 780 thousand acres, while Kansas area increased by 77.4% to 165 thousand acres. Oklahoma now has the 3rd highest cotton acreage in the United States.

In the Southeast, acreage expanded by 363 thousand acres in 2018. In all states except North Carolina, 2018 cotton acreage was the 2nd highest in the last 10 years, behind the 2011 crop year. The largest increases occurred in Georgia and Alabama. Mid-South acreage increased slightly in 2018, while upland acreage in the West declined by 36 thousand acres.

Abandonment was much higher in 2018 as compared to recent years. U.S. abandonment is estimated to be 26.1% in 2018 as compared to 12.0% in 2017. Drought conditions in the Southwest resulted in large levels of abandonment in Oklahoma and Texas, while hurricanes and frequent
harvest-time rains contributed to higher abandonment in the Southeast.

In 2018, the estimated national average cotton yield of 867 pounds was 38 pounds lower than the previous year but still higher 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.

In the Southwest, the drought resulted in lower yields in 2018. For the region, the average yield of 771 pounds was 48 pounds lower than 2017 but still above the 5-year average. In Texas, the yield of 768 was 41 pounds lower than 2017 but still higher than the 5-year average. The Oklahoma yield of 716 pounds was 128 pounds below the 5-year average. At 1,063 pounds, the Kansas yield was slightly higher than the previous year and 83 pounds above the 5-year average.

In the Southeast, the 2018 yield for all states except Virginia was below the 5-year average. Yield and quality losses occurred in most of the Southeast states due to hurricanes and rainfall during harvest time. The largest yield loss occurred in Georgia. The 2018 Georgia yield of 654 pounds is 26.1% below the 5-year average and the lowest yield since 2004. For the region, the 2018 yield of 740 pounds was 130 pounds lower than the 5-year average and 143 pounds lower than in 2017. Prior to the hurricanes, much of the Southeast crop had the potential to produce the highest yields on record.

Overall, Mid-South yields were above the 5-year average in 2018. At 1,142 pounds, the 2018 yield is the highest on record for the region. In all Mid-South states, the 2018 yield was higher than the 5-year average. The Mid-South crop had the potential to produce even higher yields but excessive rainfall during harvest impacted both yields and quality. Harvest was delayed in most cotton producing regions due to wet conditions.

The average upland yield in the West is estimated at 1,433 pounds, which is 43 pounds below the 5-year average. The Arizona yield was below the 5-year average while the New Mexico yield was slightly above the 5-year average. The California yield of 1,910 pounds was 242 pounds above the 5-year average and 614 pounds higher than in 2017.

With 15.8 million running bales classed through February 4, color grades for the 2018 crop are lower than in 2017 as a result of the weather issues across the Cotton Belt. In total for the Cotton Belt, 76.5% of the 2018 crop is grading 41 or better as compared to 88.2% of the 2017 crop. All regions fell below their five-year average in terms of color. At 71.1%, the Mid-South had the lowest percentage grading 41 or better in 2018 as compared to 95.8% in 2017.

The current marketing year began with cotton stocks at 4.3 million bales. When added to the recent harvest, total supplies for the 2018 marketing year are estimated at 23.1 million bales. Total supplies will be more than sufficient to satisfy estimated use of 18.4 million bales. U.S. exports for the 2018 crop year are currently estimated at 15.1 million bales.

U.S. textile mills are expected to consume 3.3 million bales in the current marketing year, up 75 thousand bales from 2017. The Economic Adjustment Assistance Program (EAAP), reauthorized 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 2019 planting season, U.S. acreage decisions will likely be impacted by government policies, global
economic events, weather, market, and agronomic conditions. Although much uncertainty remains with the U.S.-China trade dispute, the passage of the 2018 Farm Bill does provide a measure of stability for cotton producers with the continuation of the seed cotton PLC/ARC program. Trade uncertainty along with a slowdown in global economic growth has resulted in downward pressure on prices over the last few months.

During the first half of the 2018 marketing year, the December 2019 futures contract was trading in the 76-78 cent range and some producers were able to lock-in higher prices for a portion of their expected 2019 crop. From December 21 to early February, prices have been locked in the 73-74 cent range. Despite the recent drop in prices, current prices are only slightly lower than a year ago. At this time last year, the December 2018 contract was trading in the 74-75 cent range.

Corn prices declined throughout most of the 2018 marketing year but have been improving in recent months. As of early February, the December 2019 contract was trading at $4.02 per bushel, which is 12 cents/bu. higher than a year ago. Soybean futures prices have declined relative to last year. By early February, the November 2019 contract traded at $9.59 per bushel, which is 42 cents lower than a year ago.

A critical component of the economic outlook is the NCC’s annual planting intentions survey. The 2019 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 2018 and intended acreage for 2019. 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 2018, average soybean prices during the 2019 survey period (December 15 – January 15) were down by 3.5%, corn prices were trading about 4.4% higher, and cotton prices were trading 0.3% higher. The cotton-to-corn price ratio is lower than in 2018 due to higher corn prices as compared to last year. The cotton-to-soybean price ratio is higher than in 2018 due to lower soybean prices.

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.

For the 2019 crop year, many producers have indicated a desire to reduce soybean acreage due to low returns in 2018. As a result, corn is expected to provide some competition for cotton and soybean acres in 2019. A review of the Council’s survey will begin with a look at the Southeast.

In the Southeast, survey results indicate a 2.6% decrease in the region’s upland area to 2.8 million acres. All states except North Carolina and Virginia show a decline in acreage. In Alabama, the survey responses indicate a slight decrease (-0.6%) in cotton acreage as well as a reduction in corn, wheat, soybeans, and ‘other crops’. In Florida, respondents indicated less cotton and ‘other crops’, likely peanuts. In Georgia, cotton acreage is expected to decline by 3.6%. Georgia growers expect to plant more corn and ‘other crops’, likely peanuts. In North Carolina, a 0.1% increase in cotton acreage is expected. Acreage of corn and
‘other crops’ is expected to increase in North Carolina, while soybean and wheat acreage is expected to decline. In South Carolina, acreage is expected to decline by 5.4%. South Carolina growers expect to plant more corn and soybeans and less acreage of ‘other crops’. Cotton acreage is expected to increase by 3.5% in Virginia. Virginia growers intend to plant less soybeans and ‘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 2.3 million acres, an increase of 13.6% from the previous year. Survey results suggest that the increase in cotton acres can be attributed to a shift away from soybeans.

Across the region, all states intend to increase cotton acreage. Arkansas producers intend to plant 14.4% more cotton acreage and reduce soybeans and ‘other crops’. Arkansas growers expect to increase corn acreage as well. The largest percentage increase was reported by Louisiana producers who expect to plant 22.2% more acreage in 2019. Louisiana growers expect to plant less corn and soybeans and more ‘other crops’. In Mississippi, respondents expect to plant 18.4% more cotton. Mississippi respondents expect to increase corn acreage and reduce soybeans and ‘other crops’. Missouri growers expect to increase cotton acres by 6.9% and plant less soybeans. In Tennessee, cotton acreage is expected to increase by 5.9% as land shifts away from soybeans and wheat. Tennessee growers also intend to plant more corn in 2019. All states in the Mid-South intend to plant less soybeans in 2019. All Mid-South states except Louisiana expect to increase corn acreage in 2019.

Growers in the Southwest intend to plant 8.8 million acres of cotton, an increase of 2.2%. Increases in cotton area are expected in all three states. In Kansas, producers intend to plant 3.4% more cotton acres in 2019. Kansas growers intend to plant more wheat and less ‘other crops’, likely sorghum. In Oklahoma, a 1.0% increase in cotton acreage is expected. Overall, Texas acreage is expected to increase by 2.3%. In south Texas, respondents indicate a 1.9% increase in cotton acreage. South Texas growers intend to plant less corn, wheat, and soybeans. Respondents from the Blacklands indicate a decrease of 10.8% in cotton acreage, a decrease in corn acreage, and an increase in ‘other crops’. In West Texas, respondents indicated a 2.9% increase in cotton acreage and an increase in ‘other crops’.

With intentions of 286 thousand acres, producers in the West expect to plant 2.9% more acres of upland cotton. Cotton acreage is expected to increase in Arizona and California and decrease in New Mexico. The survey results for Arizona suggest a 1.0% increase in upland cotton acres and a decrease in all other crops. In California, growers intend to plant 14.4% more upland cotton acres and more ELS cotton and wheat. Summing across the 4 regions gives intended 2019 upland cotton area of 14.2 million acres, 2.8% above 2018.

The survey indicates that growers intend to plant slightly more ELS cotton in 2019. California growers expect to plant 9.7% more ELS cotton, while Arizona growers expect to plant 19.9% less ELS cotton. New Mexico and Texas growers expect to reduce ELS acreage by 1.4% and 10.0%, respectively. Overall, U.S. cotton growers intend to plant 264 thousand ELS acres in 2019. Summing together the upland and ELS cotton intentions shows U.S. all-cotton plantings in 2019 of 14.5 million acres, 2.9% higher than in 2018.
Based on the current prices of cotton and cottonseed, total revenue is expected to fall short of total costs. For the past five 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 2019. Production costs remain high and prices are not high enough to cover all production expenses for many producers. While the Market Facilitation Program (MFP) will provide some compensation to producers for the reduction in prices due to trade disruptions, additional disaster assistance is needed to help Southeast growers recover from the hurricane losses. The 2018 crop year has been a very challenging year for many growers across the Cotton Belt.

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 profitability 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, 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, due to the rainfall in the latter part of 2018 and continuing into early 2019, most regions currently have adequate moisture so the abandonment rates for Texas and Oklahoma are assumed to be slightly lower than the recent 5-year average. Also, 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 10.1%, Cotton Belt harvested area totals 13.0 million acres. Using an average 2019 U.S. yield of 840 generates a cotton crop of 22.7 million bales, with 21.9 million bales of upland and 782 thousand bales of ELS.

Combining projected production with expected beginning stocks of 4.5 million bales and imports of 5 thousand bales gives a total U.S. supply of 27.2 million bales. This is an increase of 4.1 million bales from the 2018 level. Cottonseed production is estimated to increase to 7.0 million tons in the 2019 marketing year. With 375 thousand tons of beginning stocks, 2019 cottonseed supply totals 7.4 million tons.

NCC projects domestic mill use of cotton at 3.4 million bales for the 2019 marketing year, slightly above the 2018 estimate of 3.3 million bales. As the single largest user of 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.

Now, we will turn our attention to the world market with a review of 2018 and then discuss prospects for the 2019 marketing year.

One of the most challenging issues facing the global cotton market is the uncertainty surrounding the ongoing trade tensions between the United States and China. As of early February, the two countries had concluded a round of talks aimed at resolving the dispute with further discussions planned for mid-February. President Trump has set a March 1 date for
either resolving the trade issues or increasing the tariffs applied to approximately $200 billion of imports from China.

For this outlook, the ultimate fate of the tariffs is a significant wildcard impacting the global market. Based on the positive statements resulting from the recent negotiations, the NCC assumes that the additional tariffs being imposed by the two countries will be removed in advance of the 2019 marketing year. With exact timing unknown, the ultimate resolution is not assumed to have a significant impact on the balance sheet for the 2018 marketing year. However, the assumed resolution plays a significant role in the balance sheet for the 2019 marketing year. Several key impacts will be highlighted during the review of the projections.

World cotton production declined in 2018 to an estimated 118.1 million bales due to lower acreage and yields. The U.S. was not the only country plagued by weather and pest issues in 2018. As compared to 2017, India’s crop is expected to be 2.0 million bales lower. Australia harvested 43.4% less acreage in 2018 due to severe drought conditions, resulting in a 2.2 million bale reduction as compared to 2017. Pakistan’s production is projected to be 950 thousand bales lower than the previous year. The 19.1% increase in Brazil’s cotton acreage in 2018 did offset some of the production losses experienced in other countries. Brazil is expected to produce a record 11.0 million bales, which is 1.8 million bales higher than 2017.

World consumption is expected to be 124.6 million bales in the 2018 marketing year. Estimates have been revised downward due to the ongoing trade dispute as well as a slowdown in the Chinese and world economies. China is projected to consume 40.7 million bales in 2018. The gap between China’s cotton consumption and production is currently around 14 million bales. From 2015-2018, the gap was filled with reserve sales and a small level of imports. In the last four years, China reduced their total ending stocks from 66.4 million bales in the 2015 marketing year to an estimated 31.2 million bales in the 2018 marketing year, which is now considered to be approaching 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. Based on recent USDA estimates, current state reserve stocks are about 13 million bales and are projected to decline further by the end of the 2018/19 crop year. However, free stocks are currently much higher than in recent years and are estimated to be between 18 and 20 million bales. Based on recent statements from Chinese government officials, the state reserve level may be maintained at about 11.5 million bales. Due to the high level of free stocks, it is unclear if China will import more cotton to fill the reserves in the 2018 crop year. For the 2018 crop year, China is expected to import 7.0 million bales, which is 1.3 million bales higher than in 2017.

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 approximately 3.0 million bales of U.S. cotton in the 2018 marketing year as a result of increased demand for cotton, declining stockpiles, and larger gap between China’s domestic production and consumption.

With the imposition of the 25.0% tariff, China has turned to other suppliers during the 2018 marketing year. 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 United States, 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 Australia, Brazil, and the United States. For China, cotton imports from Australia, Brazil, and the U.S. are comparable since the cotton is machine-picked and of higher quality. In the last two marketing years, the average market share of Chinese imports for the U.S., Australia, and Brazil was 45.3%, 20.5%, and 5.3%, respectively.

Based on the latest import data for the 2018 marketing year (August-December), the share of Chinese imports for the U.S., Australia, and Brazil is 12.2%, 40.0%, and 20.6%, respectively. Due to seasonality, Australia and Brazil generally have a higher market share of Chinese imports at this point in the marketing year. However, the data clearly indicates an increase in market share for Australia and Brazil and a decrease for the United States.

U.S. exports are projected to reach 15.1 million bales in the 2018 marketing year. Despite reduced sales to two of our largest customers during the first half of the marketing year, the sales pace increased in December, with higher reported sales to India, Turkey, and Pakistan. Sales reached the highest level in the marketing year during the week ending December 20. Due to the government shutdown, the most recent export reports are not currently available, but industry feedback suggests a continuation of the strong sales pace in December and January.

In the last few months, the Turkish economy has stabilized following the crash of the Turkish Lira in the first half of 2018. Turkish mills have been slowly reentering the market. For the 2010-2017 marketing years, 13.0% of the U.S. export volume was shipped to Turkey. Based on the latest export report as of December 20, 2018, export commitments to Turkey of 485 thousand bales represent 4.4% of total export commitments. The average volume of export commitments at this point in the marketing year in the last three years was 860 thousand bales.

World trade is projected to be higher in the 2018 marketing year, but the trade dispute and increased competition from other major exporting countries has led to a decline in the U.S. market share. Despite the decline, the U.S. will remain the largest exporter of cotton with a market share of 36.2% as compared to 37.8% in 2017.

World consumption is expected to exceed production by 6.5 million bales in the 2018 marketing year. Ending stocks are projected to fall by 6.9 million bales to 73.6 million bales, with a stocks-to-use ratio of 59.0%. Chinese stocks are projected to decline by 6.8 million bales in 2018. Stocks outside of China are projected to decrease slightly to 42.3 million bales, which is about 79 thousand bales lower than the 2017 marketing year.

For the 2019 marketing year, world area is projected to increase by 5.6% to 86.1 million acres, which is the 2nd highest acreage level since the 2004 marketing year. In 2011, world area increased to a record 89.1 million acres in response to the large increase in cotton prices. World production is estimated to increase by 7.4 million bales in 2019 to 125.5 million bales, which would be the highest level since the 2011 crop.

Assuming a resolution to the U.S.-China trade dispute, China is expected to increase mill use in 2019 to 41.5 million bales. While an increase in Chinese mill use is expected, continued growth in cotton demand is still impacted by competition from lower priced manmade fibers. While the recent focus on
plastic pollution across the world has had a negative impact on the production and use of manmade fiber, polyester prices are expected to decline in 2019 due to lower oil prices.

With a further reduction in stocks for the 2018 crop year, China’s imports are expected to increase in the 2019 crop year to 11.1 million bales. With a resolution to the U.S.-China trade dispute, the U.S. is expected to export more cotton to China in the 2019 marketing year and gain back some market share. Chinese stocks are projected to fall by 4.3 million bales during the 2019 marketing year to 26.9 million bales. If realized, stocks would be down almost 40.0 million bales from the 2014 peak. World consumption is projected to increase to a record 127.4 million bales in 2019. Ending stocks are projected to decline by 2.2 million bales in the 2019 marketing year to 71.4 million bales, resulting in a stocks-to-use ratio of 56.0%. Stocks outside of China are projected to increase to a record 44.5 million bales.

For the U.S. balance sheet, exports in the 2019 marketing year are projected to increase to 17.4 million bales, up from 15.1 million bales in 2018. If realized, it would represent the 2nd highest level of U.S. exports, second only to the 2005 marketing year. When combined with 3.4 million bales of U.S. mill use, total offtake falls short of expected production and ending stocks are projected at 6.3 million bales. In absolute terms, stocks would be the highest since the end of the 2008 marketing year. A stocks-to-use ratio of 30.0% would be the highest since the 2015 marketing year.

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. Cotton prices have maintained a weaker appearance since August 2018 due to the U.S.-China trade dispute as well as a slowdown in the world economy.

Based on the underlying assumptions and resulting cotton balance sheet, the level of stocks outside of China in the 2018 marketing year along with higher projected production in 2019 may contribute to a more bearish tone for cotton prices in the next year. However, the increase in world trade due to higher Chinese imports along with a resolution to the U.S.-China trade dispute could provide some price support.

As with any projections into the future, there are uncertainties and unknowns that can change the outcome. For the coming year, a key factor affecting the U.S. cotton industry is the ongoing U.S.-China trade dispute and the 25% tariff on U.S. cotton imported into China.

China has reduced their reserve stocks and is expected to import more cotton in the 2019 marketing year. A continuation or escalation of the trade tensions will have profound impacts on the U.S. and global balance sheets. The projected growth in China’s mill use would not be expected to materialize and mill use could decline slightly relative to the current marketing year. China’s imports for the 2019 marketing year could be 800 thousand to 1.0 million bales lower than the projected level of 11.1 million bales. Of that reduced total, China would import significantly less cotton from the U.S. and more cotton from other major cotton producing countries. Brazil, in particular, appears poised to gain market share in China at the expense of the United States.

Under a scenario with tariffs remaining in place, the projected expansion in world trade and the opportunity to backfill trade into other markets would allow U.S. exports in the 2019 marketing year to increase from 2018, but not to the extent as expected in the
absence of tariffs. U.S. exports for the 2019 marketing year would be expected to be between 16.0 and 16.5 million bales rather than 17.4 million bales. As a result of the smaller expansion in exports, U.S. ending stocks would approach 7.5 million bales. The longer-term imposition of tariffs would also dramatically increase the likelihood of permanent losses in market share in China.

Despite the setbacks and short-term challenges that have occurred during this past year, it is important to consider the bigger picture. The global economy continues to expand and the population keeps growing. World cotton consumption is trending upward as market share relative to other fibers has stabilized. World stocks are declining, and world production will eventually have to increase to keep up with consumption.
Table 1 - Balance Sheet for Selected Countries & Regions
(Assuming a resolution to the U.S.-China Trade dispute)

<table>
<thead>
<tr>
<th>Country</th>
<th>14/15</th>
<th>15/16</th>
<th>16/17</th>
<th>17/18</th>
<th>18/19</th>
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<td>World</td>
<td></td>
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<tr>
<td>Harvested Area (Thou Acres)</td>
<td>83,801</td>
<td>75,986</td>
<td>73,668</td>
<td>82,922</td>
<td>81,607</td>
<td>86,149</td>
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<tr>
<td>Yield (Pounds/Acre)</td>
<td>683</td>
<td>607</td>
<td>695</td>
<td>716</td>
<td>695</td>
<td>699</td>
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<tr>
<td>Production (Thou Bales)</td>
<td>119,219</td>
<td>96,156</td>
<td>106,663</td>
<td>123,696</td>
<td>118,104</td>
<td>125,479</td>
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<td>Trade (Thou Bales)</td>
<td>36,065</td>
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<td>37,695</td>
<td>40,978</td>
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<td>Mill Use (Thou Bales)</td>
<td>112,231</td>
<td>113,242</td>
<td>116,174</td>
<td>124,360</td>
<td>124,630</td>
<td>127,385</td>
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<td>Ending Stocks (Thou Bales)</td>
<td>106,857</td>
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<td>80,404</td>
<td>80,466</td>
<td>73,567</td>
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<td>United States</td>
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<tr>
<td>Harvested Area (Thou Acres)</td>
<td>9,348</td>
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<td>Yield (Pounds/Acre)</td>
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<td>766</td>
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<td>Production (Thou Bales)</td>
<td>16,319</td>
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<td>17,170</td>
<td>20,923</td>
<td>18,750</td>
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<td>Net Exports (Thou Bales)</td>
<td>11,234</td>
<td>9,120</td>
<td>14,910</td>
<td>15,844</td>
<td>15,093</td>
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<td>Harvested Area (Thou Acres)</td>
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<td>Mill Use (Thou Bales)</td>
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<td>35</td>
<td>35</td>
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In the early weeks of 2019, concerns of a slowdown in global economic activity have carried over from 2018. Financial markets have experienced increased volatility and economic growth has slowed. Global political turmoil and trade policy continue to impact the world economy. Decreased optimism regarding the U.S. and global economy has led to a decrease in projected growth for 2019 and 2020. Political uncertainty and potential changes in monetary and trade policy have created downside risks over the medium term, and global growth is expected to slow down in the near term.

The International Monetary Fund (IMF) January 2019 *World Economic Outlook* noted that the global expansion has weakened in part due to the negative effects of the tariffs in the U.S. and China. Escalating trade tensions, further tightening of financial conditions, and a greater-than-expected slowdown in China could create additional downside risks to global growth prospects.

The Wells Fargo Securities January 2019 *Monthly Outlook* also included a similar assessment and outlook for the global economy. The slowdown in economic growth can, in part, be attributed to policy changes. The increase in interest rates in 2018 led to a reduction in housing activity and auto sales. Trade policy has created headwinds leading to lower U.S. exports to China and reduced business fixed investment spending. While a decline in U.S. GDP growth was expected following the interest rate hikes in 2018, events in the past month have led to a further reduction in growth forecasts for 2019. The Fed was expected to hike interest rates again in March 2019, but sentiment has recently changed and many expect the Fed to postpone the first increase until after the June meeting.

Expectations for a slowdown in future economic growth appear to be a driving factor behind the latest survey of consumer attitudes. As measured by the Reuters/University of Michigan’s Consumer Sentiment Index, consumer confidence declined in January to 90.7 (Figure 1), which is the lowest level since President Trump was elected. However, the average level for 2018 was the highest level since 2000. The index is designed to gauge the attitudes of the American consumer with regards to the economy.

![Figure 1 - Consumer Sentiment Index](image)

Consumers reported the worst outlook for the national economy since mid-2014. The outlook is based on the partial government shutdown, tariff impacts, financial market volatility, lower global economic growth, and uncertainty regarding monetary policies. While the current strength in personal finances should support consumer spending in 2019, consumers do see a need to increase savings in the near-term. They anticipate a slightly lower inflation rate of 2.6% in 2019.
U.S. Gross Domestic Product

As determined by the Bureau of Economic Analysis (BEA), the U.S. 2018 preliminary third quarter real Gross Domestic Product (GDP) increased by 3.4% (Figure 2), following on gains of 4.2% in the second quarter. The increase in real GDP in the third quarter primarily reflected positive contributions from personal consumption expenditures (PCE), nonresidential fixed investment, federal government spending, and state/local government spending that were partially offset by a negative contribution in exports and residential fixed investment. Imports, which are a subtraction in the GDP calculation, increased.

The deceleration in GDP growth in the third quarter is primarily due to downward revisions of personal consumption expenditures (PCE) and exports. This was partially offset by an increase in private inventory investment.

The Wells Fargo January 2019 Monthly Outlook projected GDP for the fourth quarter of 2018 at 2.5% and a 2018 rate of 2.9%. Economic growth is expected to lose some momentum in 2019 with a projected GDP growth rate of 2.2% in the first quarter and a 2.6% annual growth rate. Business fixed investment is expected to increase by 3.9% as compared to 6.9% in 2018.

The manufacturing Purchasing Managers’ Index (PMI) decreased in December 2018 to the lowest level since November 2016. The PMI is an indicator of the economic health of the manufacturing and service sectors. U.S. manufacturing employment increased by 284,000 in 2018, compared with an increase of 207,000 in 2017.

The latest IMF projections take a similar tone regarding U.S. GDP growth with expansion of 2.5% in 2018, followed by a slower growth rate of 1.8% in 2019.

According to the BEA, U.S. real personal consumption expenditures (PCEs) expanded in the third quarter of 2018 by 3.5% (Figure 3), compared with an increase of 3.8% in the second quarter. Durable goods increased 3.7% in the third quarter, compared with an increase of 8.6% in the second quarter. Nondurable goods increased 4.6% in the third quarter, compared with an increase of 4.0% in the second quarter. Services increased 3.2% in the third quarter, compared with an increase of 3.0% in the second quarter.

The latest outlook by Wells Fargo puts the fourth quarter growth in PCEs at 3.6%. For 2019, PCEs are projected to grow at 2.4% to 2.6% per quarter.
U.S. Employment

Although still below pre-recession levels, the 2018 U.S. jobs market experienced its best performance of the current economic recovery. In December 2018, civilian employment stood at 60.6% of the population (Figure 4), with a slight increase throughout 2018 and slightly above the previous year. The latest data fall short of the pre-recession levels of 63.0%, but still come as welcomed news after the stagnant data reported between 2010 and 2013.

Figure 1 - Civilian Employment

Total nonfarm payroll employment increased by 32,000 in December. For 2018 as a whole, job growth totaled 2.1 million, compared with 2.2 million in 2017.

Employment in professional and business services increased by 43,000 in December, and employment in food services and drinking establishments increased by 42,000. Health care added 50,000 jobs in December.

Manufacturing employment increased by 32,000 in December. Construction employment increased by 38,000 and retail trade employment decreased by 24,000 in December. Employment in other major industries (mining, wholesale trade, transportation and warehousing, information, financial activities, and government) was relatively unchanged from the previous month.

According to the latest government estimates, the December 2018 unemployment rate was 3.9% (Figure 5), as compared to 4.1% 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 further improvement in 2018 as housing starts continued to increase. However, construction dropped sharply at the end of 2018. According to the U.S. Census Bureau, the seasonally-adjusted annual rate for new-home construction was 1.3 million units in November (Figure 6). This is 3.2% above the revised October estimate of 1.2 million units but is 3.6% below the November 2017 rate.
According to Freddie Mac, 2018 home sales and home price growth declined from 2017, which was the best year in the housing market in a decade. However, the reduction in home price growth is a reflection of increased home supply in 2018. The labor market was good in 2018, and mortgage applications are expected to increase due to the recent moderation in mortgage rates, which is a positive development heading into 2019. Growth in home sales is expected if economic activity remains stable and mortgage rates remain under 5.25% in 2019.

Homeownership rates have recovered over the last few years. The growth is primarily among households earning less than the median income. The increase in home prices over the last few years is good news and a crash is not expected due to the larger home equity cushion in place. Homeowners have become more conservative in using their home equity and recognize the importance of having larger home equity values in case home prices decline. The increase in home ownership rates and home equity is a good development for consumer financial health and the economy.

Freddie Mac expects gradual increases in interest rates in 2019 as they continue to tighten monetary policy. The housing market is expected to adjust to higher mortgage rates and the recent moderation in mortgage rate increases may allow for a modest growth rate in 2019.

While a large expansion has occurred in the economy since the Great Recession, the housing market has not fully recovered. Residential housing construction has not increased at a level high enough to meet demand, resulting in a rapid increase in home prices. Housing costs have been the largest factor preventing young adults from buying homes. The increase in development costs and shortage of skilled labor have been key factors preventing a higher level of housing production. The inadequate level of U.S. housing supply will continue to be a major challenge facing the housing market in 2019 and beyond.

At 4.9%, the 30-year mortgage rate for December 2018 increased by 0.04% from the previous month (Figure 7). Mortgage rates increased throughout 2018 with the most recent surveys indicating a preliminary January number of 4.5%. For 2019, Freddie Mac expects to see some additional increases in mortgage rates.

Federal Reserve Board
Based on realized and expected labor market conditions and inflation, the target range for the federal funds rate was maintained at 2.3% to 2.5% in January 2019 (Figure 8). According to the minutes from the January
2019 Federal Open Market Committee, the Committee seeks to foster maximum employment and price stability. The Committee continues to view sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee’s 2.0% objective as the most likely outcome. However, based on recent global economic and financial developments and muted inflation pressures, the Committee will be patient as it determines future adjustments to the target range. While the Fed expects continued growth, future adjustments will depend on economic conditions. Following the December 2018 Committee meeting, the Fed had expected two rate hikes in 2019. The Fed has now taken a more cautious stance to potential rate hikes over the next year.

A January 2019 Wall Street Journal survey indicates that 29.2% of respondents expect the next increase in the federal funds rate in March, while 11.1% expect the next increase in April/May and 40.3% expect the next increase in June. Many foresee the Federal Reserve cutting rates starting in 2020. Most respondents indicated a growing risk of recession in the United States.

Federal Budget Situation
The Congressional Budget Office (CBO) released the annual Budget and Economic Outlook in January. Projections by CBO indicate that federal outlays will continue to outpace revenues over the next decade. If current laws remain unchanged, CBO projects an upward path for budget deficits over the next decade due to higher spending for retirement and health care programs. For fiscal year 2019, federal spending is estimated at $4.4 trillion with estimated revenue of $3.5 trillion (Figure 9), resulting in a deficit of $906 billion.

Revenues for fiscal year 2019, which would be a new high, represent an increase from the 2018 value. Outlays in fiscal 2018 were up $127 billion, or 3.2% from the previous year. For fiscal 2019, CBO projects that revenue will grow by 5.6%.

For fiscal 2019, CBO estimates a deficit of $897 billion (Figure 10). At 4.2% of GDP, the 2019 deficit will be higher than last year. According to CBO’s long-term projections, the annual deficit would increase to 4.7% of GDP by 2023.
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 78.0% of GDP in 2018 to 92.7% of GDP in 2029. This amount would be the largest debt held by the public since 1947 and over twice the average of the past five decades as compared to GDP.

According to CBO, the large and increasing amount of federal debt would have serious negative consequences, including: increasing federal spending on interest payments, reductions in the nation’s capital stock leading to lower productivity and total wages; less flexibility to use tax and spending policies to respond to unexpected challenges; and eventually increasing the risk of a fiscal crisis (in which investors would demand high interest rates to buy the government’s debt).

**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 just 1.9% in 2018 after a 2.1% increase in 2017 (Figure 11). For 2018, the annual average CPI grew at 2.2%, which is higher than the 2017 value and recent historical averages.

In December, the shelter index increased and was largely responsible for the overall increase in all items. The energy index and gas index decreased. The food index increased as the indexes for food at home and food away from home both increased.

The index for all items less food and energy fell by 0.1% in December. The decline in the all items index was caused by a 7.5% decline in the gasoline index which more than offset increases in the shelter, food, and other energy components. The energy index declined by 3.5% as gasoline and fuel oil declined, but natural gas and electricity increased.

Over the last 12 months, the all items index rose 1.9%, which is the first time the 12-month change has been under 2.0% since August 2017. The index for all items less food and energy rose by 2.2% over the last 12 months. The food index rose 1.6% over the last year, while the energy index declined by 0.3%.

On a December-to-December basis, the PPI for finished goods increased in 2018 by 1.4% (Figure 12).
Energy Prices and Supply
For 2019, energy prices continue to stay at the forefront of any analysis of the general economy. After 5 years of crude oil prices (as measured by the West Texas Intermediate (WTI) market) ranging between $80 and $100 per barrel, the latter half of 2014 brought a pronounced change in energy markets with price declines approaching 50.0%. By the end of 2015, prices dropped to $37 per barrel. Prices continued to decline to $30 per barrel in February 2016 before starting a slow upward trajectory. The average price in 2017 was $51 per barrel compared to $43 per barrel in 2016. At the end of 2017, prices reached $58 per barrel. Prices continued to climb in 2018 to reach $71 per barrel in July, which was the highest level since November 2014. However, in November, prices sharply declined to $57 per barrel.

The Department of Energy’s Energy Information Administration (EIA) estimates that global petroleum and other liquid fuels inventories increased by 1.0 million barrels per day (bbl/d) in the fourth quarter of 2018, contributing to the decline in oil prices. Global inventories are expected to rise in 2019 at a pace of 0.2 million bbl/d.

Global consumption of petroleum and other liquid fuels grew by 1.4 million bbl/d in 2018, with most of the growth in countries not included in the Organization for Economic Cooperation and Development (OECD) countries. Consumption averaged 100.0 million bbl/d for 2018. EIA expects global consumption to grow by 1.5 million bbl/d in 2019, with 1.1 million bbl/d from non-OECD consumption, mostly in China and India. OECD consumption increased by 0.4 million bbl/d in 2018 and is expected to increase by 0.4 million bbl/d in 2019 and 0.3 million bbl/d in 2020. The United States is the main driver of OECD consumption growth.

The Organization of the Petroleum Exporting Countries (OPEC) countries produced an average of 31.9 million bbl/d in 2018. EIA projects lower production in OPEC countries by 1.0 million bbl/d in 2018. Production is expected to remain flat in 2019. In December 2018, OPEC participants agreed to a 1.2 million bbl/d reduction relative to October 2018 production due to rising oil inventories and falling crude oil prices. However, EIA does not assume full compliance with the 1.2 million bbl/d target reduction.

In non-OPEC countries, EIA estimated an increase in crude oil supply of 2.5 million bbl/d in 2018, with most of the growth in the United States. For 2019, production in non-OPEC countries is expected to increase by 2.4 million bbl/day in 2019 and 1.9 million bbl/d in 2020.

Uncertainty regarding global economic and political developments could affect EIA’s price projections. Changes in the U.S. oil sector could also affect current and future crude oil prices.

The average monthly WTI crude oil spot price dropped to $49 per barrel in December 2018 following an upward trend throughout 2018 (Figure 13). The average price for 2018 was $65 per barrel compared to a 2017...
average of $51 per barrel. EIA now expects WTI crude oil prices to average $54 per barrel in 2019.

Retail diesel fuel prices (Figure 14), which track closely with crude oil prices, averaged $3.18 per gallon in 2018, which is 53 cents per gallon higher than the 2017 average price. The EIA projects diesel prices to average $2.94 per gallon in 2019 and $3.13 per gallon in 2020.

Natural gas production is expected to increase by 8.3% in 2019 to 90.2 billion cubic feet per day (Bcf/d). EIA estimates that U.S. total natural gas consumption in 2018 was 81.6 billion cubic feet per day (Bcf/d). In 2019, EIA projects an increase of 1.1 billion cubic feet per day (Bcf/d).

**U.S. Equity Markets**
After closing 2017 at 24,706, the Dow Jones Industrials Average (Dow) decreased 5.6% to 23,327 by the end of 2018 (Figure 16). By the end of January 2019, the Dow grew to 25,015.
World Economies

Global economic activity improved modestly in 2018. Global growth is expected to weaken in 2019 and 2020. According to the latest projections by the International Monetary Fund (IMF), the world economy grew by 3.7% in 2018, as compared to 3.8% in 2017 (Figure 17). Global growth was revised downward from earlier forecasts due to the effects of the U.S.-China trade dispute, introduction of new fuel emission standards in Germany, weakening financial market sentiment, and continued contraction in Turkey’s economic activity. Economic growth is expected to decline in 2018 and 2019. IMF projections call for the world economy to grow by 3.5% in 2019 and 3.6% in 2020.

The growth expectations reflect a persistent decline in the growth rate of advanced economies along with the temporary slowdown in economic growth for emerging market and developing economies in 2019.

The IMF projects that growth in advanced economies will drop from 2.3% in 2018 to 2.0% in 2019 and 1.7% in 2020. Growth rates have been reduced for many economies in the euro area, particularly Germany, Italy, and France. The growth rate for the United Kingdom is projected to be 1.5% in 2019 and 2020 but much uncertainty remains due to the Brexit situation. In the U.S., growth is expected to decline to 2.5% in 2019 and 1.8% in 2020 as the fiscal stimulus unwinds and the federal funds rate remains above the neutral interest rate (Table 2).

<table>
<thead>
<tr>
<th>Year-Over-Year % Changes</th>
<th>2017</th>
<th>2018f</th>
<th>2019f</th>
<th>2020f</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>3.8</td>
<td>3.7</td>
<td>3.5</td>
<td>3.6</td>
</tr>
<tr>
<td>U.S.</td>
<td>2.2</td>
<td>2.9</td>
<td>2.5</td>
<td>1.8</td>
</tr>
<tr>
<td>Euro Area</td>
<td>2.4</td>
<td>1.8</td>
<td>1.6</td>
<td>1.7</td>
</tr>
<tr>
<td>Japan</td>
<td>1.9</td>
<td>0.9</td>
<td>1.1</td>
<td>0.5</td>
</tr>
<tr>
<td>China</td>
<td>6.9</td>
<td>6.6</td>
<td>6.2</td>
<td>6.2</td>
</tr>
<tr>
<td>India</td>
<td>6.7</td>
<td>7.3</td>
<td>7.5</td>
<td>7.7</td>
</tr>
<tr>
<td>Russia</td>
<td>1.5</td>
<td>1.7</td>
<td>1.6</td>
<td>1.7</td>
</tr>
<tr>
<td>Brazil</td>
<td>1.1</td>
<td>1.3</td>
<td>2.5</td>
<td>2.2</td>
</tr>
<tr>
<td>Mexico</td>
<td>2.1</td>
<td>2.1</td>
<td>2.1</td>
<td>2.2</td>
</tr>
</tbody>
</table>

Source: International Monetary Fund, January 2019

IMF projects that output of emerging and developing economies (EMDEs) will expand at 4.5% in 2019 and 4.9% in 2020. The growth rate in emerging and developing Asia is expected to drop to 6.3% in 2019 as China’s economy slows due to trade tensions and financial regulatory tightening. India’s economy should pick up in 2019 due to lower oil prices and a slower rate of monetary tightening. In emerging and developing Europe, growth is expected to be weaker than previously anticipated and slower recovery is expected for Turkey in 2020.
Growth is expected to recover in Latin America over the next two years. The economic expansion was recently adjusted downward due to a reduction in growth potential for Mexico, Venezuela, and Argentina that is only partially offset by an upward revision in the forecast for Brazil.

In the Middle East, North Africa, Afghanistan, and Pakistan, growth is expected to remain subdued at 2.4% in 2019 and increase to 3.0% in 2020. The growth rate is expected to increase in sub-Saharan Africa from 2.9% in 2018 to 3.5% in 2019 and 3.6% in 2020.

In the near-term, downside risks to the global outlook include the outcome of trade negotiations and financial market conditions in 2019. Additional uncertainty that could affect the outlook is the policy agenda of new administrations, geopolitical tensions in the Middle East and East Asia, and declining trust of established institutions and political parties.

### Exchange Rates

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

In 2018, the euro averaged 0.85 per dollar, which is lower than the average value in 2017 (Table 3). At the close of 2018, the euro stood at 0.87 per dollar. The Japanese yen appreciated in 2018 to 110 per dollar. The Brazilian real depreciated against the dollar in 2018. The real declined by 14.4% against the dollar in 2018 and further declined to 3.74 per dollar in late January 2019.

<table>
<thead>
<tr>
<th>Currency per U.S. Dollar</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Euro</td>
<td>0.90</td>
<td>0.89</td>
<td>0.85</td>
</tr>
<tr>
<td>Japanese Yen</td>
<td>108.80</td>
<td>112.15</td>
<td>110.43</td>
</tr>
<tr>
<td>Brazilian Real</td>
<td>3.48</td>
<td>3.19</td>
<td>3.65</td>
</tr>
<tr>
<td>South Korean Won</td>
<td>1,161</td>
<td>1,130</td>
<td>1,100</td>
</tr>
<tr>
<td>Indian Rupee</td>
<td>67.17</td>
<td>65.11</td>
<td>68.41</td>
</tr>
<tr>
<td>Indonesiia Rupiah</td>
<td>13,309</td>
<td>13,377</td>
<td>14,239</td>
</tr>
<tr>
<td>Pakistani Rupee</td>
<td>104.51</td>
<td>105.33</td>
<td>121.62</td>
</tr>
<tr>
<td>Chinese Yuan</td>
<td>6.64</td>
<td>6.76</td>
<td>6.62</td>
</tr>
</tbody>
</table>

Source: WSJ.com

The South Korean Won and the Chinese Yuan showed a slight appreciation against the dollar in 2018. The Indian Rupee, Indonesian Rupiah, and Pakistani Rupee had a decrease in 2018.

The Federal Reserve Board publishes a real exchange rate index comparing the dollar to a weighted average of currencies of important trading partners, excluding major developed economies. Between early 2009 and mid-2011, the trade weighted index fell by almost 15 percentage points (Figure 18). However, the trend reversed course during the latter half of 2011 before peaking in mid-2012. The index subsequently declined through early 2013 before stabilizing in the second half of the year. The cyclical performance continued throughout 2014. The index has slowly trended upward since
2015. In December 2016, the index was at the highest level since 2009. Throughout 2017, the index trended downward from the high observed at the end of 2016. In 2018, the index has been on an upward path, reaching a high of 112.8 in November. In December, the index dropped slightly to 112.7.

**Commodity Prices**

The U.S. Department of Agriculture (USDA) publishes monthly indices of prices received by farmers. In January 2018, the crop price index was 78.6, which was the lowest level since January 2017. Starting in February 2018, the crop price index ranged between 86 and 90, with a high of 90 in June. Prices moved up and down for the remainder of the year. The November index of 84 represented a 5.0% increase from the October index (Figure 19).

Looking at the latest data at the time of this report, cotton prices are slightly lower than a year ago. The cotton price index steadily increased from February to July, declined in August, then trended upward until November.

The livestock price index trended upward from February to June, declined from July to September, and increased in October and November. Compared with a year ago, prices of cattle, market eggs, hogs, broilers, turkey, calves and milk are all lower.

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 and nitrogen fertilizer. In line with the previous discussion on retail diesel prices, the diesel prices paid index moved up and down throughout most of 2018. In November 2018, the diesel price index was 13.3% higher than a year ago but 1.9% lower than in October 2018.

Nitrogen prices also increased throughout 2018 (Figure 20). As of November 2018, the nitrogen price index was 16.5% higher than a year ago.

**U.S. Net Farm Income**

The latest USDA estimates place U.S. net farm income at $66.3 billion in 2018, down 12.1% from 2017’s estimate of $75.4 billion (Figure 21). Net cash income is forecast to decrease by 8.4% in 2018.

![Figure 19 - Ag Prices Received Index](image1)

Looking at the latest data at the time of this report, cotton prices are slightly lower than a year ago. The cotton price index steadily increased from February to July, declined in August, then trended upward until November.

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Nitrogen prices also increased throughout 2018 (Figure 20). As of November 2018, the nitrogen price index was 16.5% higher than a year ago.

![Figure 20 - Ag Prices Paid Index](image2)

![Figure 21 - U.S. Net Farm Income](image3)
According to USDA’s Economic Research Service, total commodity receipts are projected to increase in 2018. Crop receipts are expected to increase by $2.5 billion in 2018. Cotton cash receipts are projected to decrease by 1.0% in 2018 while fruit and nut receipts are projected to decrease by 1.7% in 2018. Cash receipts for broilers, eggs, and chickens are expected to see strong growth in 2018. Broiler receipts are projected to increase by 7.2%. Milk receipts are expected to decline by 7.1%, turkey receipts are expected to decline by 20.7%, and hog receipts are projected to decrease by 5.2% in 2018. Cattle/calves receipts are projected to decrease by 1.4% in 2018. Government payments are projected to increase by 18.3% to $13.6 billion in 2018.

Total production expenses are forecast to increase by 4.2% in 2018. Interest, labor, pesticides, electricity, fuel/oil, and feed inputs are expected to have the largest increases, while fertilizer expenses are expected to decline.

Farm financial risk indicators such as the debt-to-asset and debt-to-equity ratios are expected to rise in 2018, for the sixth year in a row, indicating increasing financial pressure on the sector. However, debt-to-asset and debt-to-equity ratios remain low relative to historical levels.

Increasing farm sector assets are projected due to a modest increase in farm real estate assets and machinery and vehicles. Farm sector debt is expected to increase by 4.2% in 2018, with real estate debt rising by 5.4%. Farm sector equity is expected to increase by 1.0%, while debt-to-asset levels are projected to increase.
U.S. Farm and Trade Policy

Agricultural policy provisions applying to the 2019 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 continues the seed cotton Price Loss Coverage (PLC) and Agriculture Risk Coverage (ARC) programs. The reference price is maintained at $0.367 per lb. Seed Cotton refers to unginned upland cotton that includes both lint and cottonseed.

In 2019, producers will have the option to elect ARC or PLC for seed cotton and that election will be effective for the 2019 and 2020 crop years. In 2021, producers will have 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% 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% 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% 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% of the previous year’s loan rate.

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 2019 loan rate is based on the 2016 and 2017 marketing years since those are the 2 most recent years as of October 1, 2018. 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% of the loan rate to 113% 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 will have the opportunity to update payment yields on all crop bases on farm by farm and commodity by commodity basis. The yield update is based on 90% of the average farm
yields from 2013-2017, only including years when a crop was planted. A plug yield equal to 75% of county average yield for 2013-2017 will be 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%. So, the yield update for cotton is 90% times 90% of the average farm yields from 2013-2017, which is equal to 81% 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 in the 2014 Farm Bill are maintained in the 2018 legislation, along with an expansion in the definition of family members. The family definition for actively engaged purposes now includes nieces, nephews, and first cousins as lineal family members.

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

**Stacked Income Protection Plan**

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

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

As with other insurance products, STAX is not subject to payment limitations or means tests. County-specific details are available both on the NCC website www.cotton.org and the USDA-RMA website www.rma.usda.gov.
Cotton Import Provisions
The 2018 Farm Bill continues without change the rules for triggering import quotas. A Special Import Quota will be opened when the average U.S. quote in the international market exceeds the prevailing world market price for 4 consecutive weeks. Global Import Quotas are triggered when the base quality spot price for a month exceeds 130% 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% of the loan rate to 113% of the loan rate in order to reflect the higher ELS loan rate in the new legislation.

Economic Assistance to Users of Upland Cotton
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 policy issues remain at the forefront for the U.S. cotton industry. Negotiation and retaliation were two common trade terms in 2018.

U.S-Mexico-Canada Agreement
On May 18, 2017, U.S. Trade Representative Robert Lighthizer notified Congress of the President’s intention to begin negotiations with Canada and Mexico to modernize the North American Free Trade Agreement (NAFTA). On August 31, 2018, the President notified Congress of his intent to sign a free trade agreement with Mexico, and also including Canada, if agreement is reached within 90 days of August 31. On September 30, the U.S. and Canada reached an agreement, and the new trade deal will be called the United States-Mexico-Canada Agreement (USMCA). The USMCA was signed by all three countries on November 30, 2018 in Argentina.

Overall, the USMCA would preserve the current benefits of NAFTA and encourage continued regional integration of the cotton and textile supply chain. It would also enhance regulatory coordination on sanitary and phytosanitary (SPS) disciplines and encourage greater cooperation in biotechnology, including gene editing. Finally, it would improve 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 would enhance regulatory transparency and encourage the compatibility of science-based measures. The advancement of transparent, non-discriminatory, science-based SPS and biotechnology measures in foreign markets is a primary negotiating objective of the U.S. agriculture community. The inclusion
of these provisions in the USMCA represents a significant step forward.

Importantly, USMCA establishes 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 would also strengthen 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 would 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 from the Buy American requirements known as the Kissell Amendment. In FY2017, TSA purchased approximately $34 million worth of textile and apparel products. Eliminating NAFTA’s loophole would thus provide significant benefits to manufacturers of U.S.-origin textile and apparel products.

**China Tariffs**

In August 2017, the United States Trade Representative (USTR) initiated an investigation under Section 301 of the Trade Act of 1974 to determine if China’s acts, policies, and practices related to technology transfer, intellectual property and innovation are unreasonable, unjustifiable, or discriminatory and burden or restrict U.S. commerce. In response to the findings of the investigation, President Trump announced on March 22, 2018 that the U.S. would respond to China’s harmful acts, policies, and practice in three separate actions: tariffs, dispute settlement in the WTO, and investment restrictions.

Currently, there have been three lists of goods for which the U.S. has announced tariffs. List 1, totaling $34 billion worth of imports from China is composed of 818 tariff lines. A 25% tariff was imposed on the items on this list with the tariffs going into effect July 6, 2018. List 1 did not contain any cotton, textile or apparel products. However, it did contain some textile machinery.

List 2 totaled $16 billion worth of imports from China. The 25% tariff on the 279 tariff lines on this list went into effect on August 23, 2018. List 2 also did not contain any cotton, textile, or apparel products.

The third list of tariff lines of products from China totaled approximately $200 billion. Tariffs for the items on this list went into effect on September 24, 2018 and were initially in the amount of 10%. The level of the additional tariffs was scheduled to increase to 25% starting January 1, 2019, but that date was postponed to March 1, 2019. List 3 contains products in HTS Chapters 50-60 which covers textile fibers, yarns, and fabrics. This includes all tariff
lines in Chapter 52 covering products from cotton, not carded or combed, cotton waste, cotton thread, yarn, and woven fabric. Cotton knit fabric tariff lines from Chapter 60 are also covered by List 3.

None of the three lists contain finished apparel and other sewn products covered in HTS Chapters 61-63. According to NCTO, most of the textile products the U.S. imports from China are finished apparel, home furnishings and other made-up textile goods (93.5%) while fiber, yarn, and fabric imports from China represent only 6.5%.

On April 1, 2018, China’s Ministry of Commerce announced China’s intention to impose retaliatory tariffs on U.S. goods in response to the U.S. announcement of the 25% tariff on steel imports and 10% tariff on aluminum imports beginning June 1, 2018 (Sections 232 tariffs). China applied a 15% duty on 120 items including fruits, nuts, wine, and steel and iron tubes and pipes. A 25% duty was applied on 8 items including pork and aluminum scrap. These tariffs took effect on April 2, 2018.

On April 3, 2018, China released another retaliation list of U.S. goods worth $50 billion that could be subject to an additional 25% tariff. This list was the first one announced in retaliation to the Section 301 tariffs announced by the United States. China’s List 1 contained 106 products which includes soybeans, airplanes, automobiles, beef, and chemicals. Cotton fiber (HTS 5201) was also included on this list. However, the list did not include any textiles or apparel. On June 15, 2018, China’s State Council announced the addition of more goods to List 1. The 25% tariff on a total of 545 categories of goods went into effect July 6, 2018.

On August 8, 2018, China released another list of retaliatory tariffs on $16 billion in U.S. goods. This was in response to the USTR’s announcement on August 7 of the final List 2 of Section 301 tariffs on $16 billion in Chinese imports. China’s List 2 included cotton and MMF waste, but no other textile products were included. A tariff of 25% was applied to the goods on List 2 beginning on August 23, 2018.

Also, in August 2018, China announced List 3 for retaliatory tariffs. This announcement was in response to the U.S. announcement of a 3rd list of Section 301 related tariffs. China’s List 3 contains 5,207 tariff lines worth $60 billion. The original List 3 announcement stated tariffs on these goods would be 5, 10, 20, or 25% and the tariffs would be enacted beginning September 24, 2018. On September 19, 2018, China announced the tariff rates for List 3 would be 5 or 10%. China’s List 3 includes combed cotton, cotton sewing thread, some cotton yarn, cotton woven and knit fabric, and some finished textile and apparel goods.

On December 1, 2018, 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 the third, $200 billion portion of the Section 301 related tariffs from 10 to 25%, 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 is 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 amount 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. A second round of talks was held in Washington, DC, January 30-31, 2019.

In January 2019, the WTO granted China’s second request for a dispute panel to rule on
the Section 301 tariffs the U.S. imposed on Chinese imports. China made its first request for a dispute panel in December 2018. That request was vetoed by the United States. However, WTO rules prevent members from blocking a dispute inquiry a second time. China asserts that the Section 301 tariffs violate WTO’s Most Favored Nation rules saying the tariffs are “unilateral” and “WTO-inconsistent”. The U.S. dismissed China’s argument noting that China responded in kind with discriminatory duties on over $100 billion in U.S. exports.

In August 2018, in recognition of the impacts of China’s retaliatory tariffs, the Trump Administration announced a plan to assist U.S. farmers and ranchers facing trade disruptions from these tariffs. The plan includes three components to assist farmers and ranchers: a Market Facilitation Program (MFP), a Food Purchase & Distribution Program, and an Agricultural Trade Promotion (ATP) Program.

The MFP provides $0.06/lb on a producer’s 2018 upland and ELS cotton production (paid in two installments). Producers may apply for MFP through February 14, 2019 but have until May 1, 2019 to certify their 2018 production. The Market Facilitation payments are subject to the existing $900,000 adjusted gross income means test and a separate $125,000 per person payment limit for the eligible crops. The other commodities eligible for the program include soybeans ($1.65/bu), sorghum ($0.86/bu), wheat ($0.14/bu), corn ($0.01/bu), dairy ($0.12/cwt) and pork ($8/head).

USDA’s Agricultural Marketing Service (AMS) will administer the Food Purchase and Distribution Program to purchase up to $1.2 billion in commodities. The specific commodities to be purchased are those impacted by unjustified tariffs imposed by other nations. Purchases will be spread over several months. USDA’s Food and Nutrition Service will distribute these commodities through nutrition assistance programs such as The Emergency Food Assistance Program and child nutrition programs.

Through the Foreign Agricultural Service, the ATP program will provide $200 million to develop foreign markets for U.S. agricultural products. The program will help U.S. agricultural exporters identify and access new markets and help mitigate the adverse effects of other countries’ restrictions. In a late January announcement, Cotton Council International will receive $9.2 million for promotional activities for cotton fiber, yarn and fabric exports.

**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.

As we enter 2019, the 3.0% duty continues to be in place and is anticipated to remain in place for the foreseeable future.

**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 next Ministerial Conference is scheduled for June 8-11, 2020 in Astana Kazakhstan. During the WTO 10th Ministerial Conference, the decision was made to continue cotton dedicated discussion 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 November 28-29, 2018. During this meeting, WTO members endorsed a new initiative to develop the economic potential of cotton by-products to assist cotton producing countries in creating new income streams for farmers and processors and to enhance access to new markets. The next cotton dedicated discussions are scheduled for June 2019.

At the WTO’s Committee on Agriculture meeting November 26-27, 2018, the U.S. and Australia presented WTO members with “counter-notifications” outlining high levels of support payments for cotton and sugar producers which India failed to notify to the WTO. These notifications follow a counter-notification the U.S. made in May 2018 concerning India’s wheat and rice support. The wheat and rice counter-notifications were the first ever counter-notifications to be submitted to the committee.

In the cotton counter-notification, the U.S. said India was substantially under-reporting the value of its market price support (MPS) for cotton, or government purchases of cotton at guaranteed prices. The U.S. noted that India reported 1.2 billion rupees in MPS for cotton in its 2015/16 notification to the WTO. However, the U.S. estimated India’s support for that time period at more than 504 billion rupees. This level of support would imply that India was in excess of its WTO spending limits on cotton support, which is fixed at 10% of the total value of overall production. At the meeting, many members shared the concerns of the U.S. regarding India’s support programs for cotton and the impact they may be having on international markets. Several members asked India to better clarify how its policies work.

**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 39 countries that are eligible for economic and trade benefits under AGOA. Of those 39 Sub-Saharan countries, 27 of them are eligible to receive AGOA’s apparel benefits. Twenty-four 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**

On October 16, 2018, USTR officially notified Congress that the Trump Administration intended to start negotiations following the completion of necessary domestic procedures on trade agreements with Japan, the UK and the EU. This began a 90-day consultation period under Trade Promotion Authority (TPA) prior to the launch of negotiations. The U.S. would not begin negotiations on a trade agreement with
the UK until the UK leaves the EU in March 2019.

A historical review of various trade agreements affecting textiles can be found at www.cotton.org.
2018 Planted Acreage

U.S. farmers planted 14.0 million acres of upland cotton in 2018, an increase of 11.3% from the previous year (Figure 22). Increases were observed in all regions except the West.

In the Southeast, the increase in 2018 cotton area was 363 thousand acres, or 14.4% (Figure 23). All states in the Southeast increased acreage in 2018. Alabama, Florida, Georgia, North Carolina, South Carolina, and Virginia increased cotton acreage by 17.2%, 19.2%, 11.7%, 14.7%, 20.0% and 16.7%, respectively. In all states except North Carolina, 2018 cotton acreage was the 2nd highest in the last 10 years, behind the 2011 crop year. State totals for the region are: Alabama– 510 thousand acres, Florida – 118 thousand acres, Georgia – 1.4 million acres, North Carolina – 430 thousand acres, South Carolina – 300 thousand acres, and Virginia – 98 thousand acres.

In 2018, plantings of 2.0 million acres in the Mid-South represented a 2.1% increase (Figure 24) from the previous year. In recent years, Mid-South farmers have demonstrated their ability and willingness to adjust their crop mix based on market signals. The slight increase in 2018 acreage continued that pattern as some growers moved away from corn and soybeans and planted more cotton. For Arkansas, Missouri, and Tennessee, acreage increased by 9.0%, 6.6%, and 4.3%, respectively. Acreage declined by 11.4% in Louisiana and 1.6% in Mississippi. State totals for the region are: Arkansas – 485 thousand acres, Louisiana – 195 thousand acres, Mississippi – 620 thousand acres, Missouri – 325 thousand acres, and Tennessee – 360 thousand acres.
In the Southwest, upland cotton area increased by 14.1% to 8.6 million acres (Figure 25), which is the highest level since 1980. Prior to 1980, the Southwest acreage had not been above 8.6 million acres since the 1950’s. The highest level in recent years was 8.0 million acres in 2011, with Texas planting 7.6 million acres. Higher cotton prices relative to wheat and sorghum contributed to the increase in each of the three states in the region. With a 33.3% increase, Oklahoma’s cotton area expanded from 585 thousand acres to 780 thousand acres. Kansas area increased by 77.4%, bringing the 2018 total to 165 thousand acres. In Texas, producers planted 7.7 million acres, an 11.6% increase from 2017.

(Acres decreased by 6.3% in Arizona, 43.2% in California, and 18.2% in New Mexico.

In 2018, overall ELS acreage decreased by 1.8%, with planted area at 248 thousand acres (Figure 27). All states except Texas had a slight decline in ELS acres in 2018.

Upland acres in the West stood at 278 thousand acres, down 11.5% from 2017.

2018 Harvested Acreage
Overall U.S. abandonment was 26.1%, the highest level since 2013 (Figure 28). In the Southwest, drought conditions increased abandonment in Texas and Oklahoma. In Texas, 41.6% of upland acres were un-harvested, which compares to the 5-year average of 22.0%. In Oklahoma, 26.9% of acres were un-harvested, which is higher than the 5-year average of 9.5%.
Hurricanes in the Southeast increased abandonment in 2018. The abandonment levels in Alabama and Georgia were at the highest level since 2002. In Alabama, 7.8% of acres were abandoned as compared to the 5-year average of 1.3%. In Georgia, 5.6% of acres were abandoned as compared to the 5-year average of 1.2%. In Florida, the abandonment rate of 32.2% is the highest on record due to the hurricane. In North Carolina and South Carolina, abandonment was 7.0% and 6.7%, respectively. The New Mexico abandonment rate was 16.7% for upland cotton, which is lower than the 5-year average of 20.9%. In other states, 2018 abandonment was generally in line or improved from 5-year averages. For a few states, 2018 abandonment was slightly above the 5-year average.

For the region, the 2018 yield of 740 pounds was 130 pounds lower than the 5-year average and 143 pounds lower than in 2017. Prior to the hurricanes, much of the Southeast crop had the potential to produce the highest yields on record (Figure 30).

Overall, cotton acreage in the Mid-South produced yields above the 5-year average in 2018. At 1,142 pounds, the 2018 yield is the highest on record (Figure 31). All Mid-South states had 2018 yields higher than the 5-year average.
Missouri had a record yield of 1,275 pounds. Arkansas had the second highest yield on record of 1,160 pounds. The Tennessee yield of 1,034 pounds was 53 pounds above the 5-year average. At 1,155 pounds, the Mississippi yield was 22 pounds above the 5-year average. At 1,036 pounds, the Louisiana yield was 34 pounds above the 5-year average and 15.9% higher than in 2017.

In the Southwest, the drought resulted in lower yields in 2018. For the region, the average yield of 771 pounds was 48 pounds lower than 2017 but still above the 5-year average (Figure 32).

In Texas, the yield of 768 was 41 pounds lower than 2017 but still higher than the 5-year average. The Oklahoma yield of 716 pounds was 128 pounds below the 5-year average. At 1,063 pounds, the Kansas yield was slightly higher than the previous year and 83 pounds above the 5-year average.

The average upland yield in the West is estimated at 1,433 pounds, which is 43 pounds below the 5-year average (Figure 33). The Arizona yield was below the 5-year average while the New Mexico yield was slightly above the 5-year average. The California yield of 1,910 pounds was 242 pounds above the 5-year average and 614 pounds higher than in 2017.

The national average ELS yield is estimated at 1,508 pounds, up 167 pounds from 2017 and 90 pounds above the 5-year average (Figure 34). Accounting for the majority of ELS acres, California heavily influences the U.S. average. With an average yield of 1,610 pounds, the California yield was 203 pounds higher than the previous year and 95 pounds above the 5-year average. At 889 pounds, ELS yields in Arizona were 38 pounds below the 5-year average. New Mexico’s yield of 904 pounds was 46 pounds above the 5-year average. The 2018 Texas ELS yield of 960 pounds was the same as last year and 36 pounds above the 5-year average.
2018 Production
The latest NCC estimate places the 2018 U.S. cotton crop at 18.7 million bales (Figure 35), down 2.2 million bales from 2017. The decrease in production comes as drought and hurricanes resulted in higher abandonment and lower yields in the Southeast and Southwest. The 2018 crop represents a 2.7 million bale increase relative to the 5-year average. Upland production is estimated at 18.0 million bales, and ELS farmers harvested 771 thousand bales.

For 2018, the Mid-South accounted for 25.9% of the total U.S. upland crop with 4.7 million bales.

At 8.4 million bales, production in the Southwest accounted for 46.7% of the U.S. upland crop. The 2.1 million bale decrease from 2017 resulted from an increase in abandoned acres as well as a 48-pound yield decline. Texas production of 7.2 million bales was 2.0 million bales lower than 2017 and 513 thousand bales higher than the 5-year average. In Oklahoma, 2018 production of 850 thousand was 170 thousand bales lower than the previous year but still the second highest on record. Kansas production increased by 155 thousand bales to 352 thousand bales due to a large increase in acreage.

The West produced 785 thousand bales of upland cotton in 2018, down 48 thousand bales from the region’s 2017 crop. The region accounted for 4.4% of U.S. production. The Western crop surpassed the 5-year average by 48 thousand bales.

The 2018 ELS crop of 771 thousand bales was 72 thousand bales higher than 2017, and higher than the 5-year average of 580 thousand bales. At 701 thousand bales, the California ELS crop was 71 thousand bales higher than 2017 due to increased acreage (Figure 37). The state accounted for 90.9%

In 2018, the Southeast is estimated to have produced 4.1 million bales, accounting for 22.9% of the total upland crop (Figure 36). The region’s 2018 crop was down by 467 thousand bales from the 2017 total.
of the total 2018 U.S. ELS crop. Arizona’s ELS crop decreased to 25 thousand bales, while the Texas crop increased to 32 thousand bales. New Mexico’s production of 13 thousand bales was slightly lower than 2017.

The 2018 crop was smaller than last year and total CCC loan stocks are expected to be lower this year. The late harvest has resulted in some ginning delays and the government shutdown has affected CCC loan stocks. More bales will be placed under the loan over the next few months as ginning nears completion.

As of January 28, 2019, outstanding upland CCC loan stocks were 4.3 million bales (Figure 39), down from 4.6 million bales in January 2018. As of the end of January, the Mid-South accounts for 55.9% of cotton placed under loan, the Southwest accounts for 25.3%, the Southeast accounts for 15.9%, and the remaining 2.9% in the West.

2018 Stock Levels
With U.S. cotton production exceeding total demand for the 2017 marketing year, the resulting carryout from the 2017 marketing year, and equivalent carry-in or beginning stocks for the 2018 marketing year, stood at 4.3 million bales (Figure 38). That represented an increase of 1.6 million bales from the stocks that were brought into the 2017 marketing year. Upland stocks totaled 4.2 million bales and ELS stocks stood at 194 thousand bales.

2018 Total Supply
Total supply for the 2018 marketing year is estimated to be 23.1 million bales, down from 23.7 million bales the previous year (Figure 40). The lower supplies are due to lower production. However, total supplies for the 2018 marketing year are 3.7 million bales above the 5-year average.
2018 Upland Cotton Quality

With 15.8 million running bales classed through January 31, the national average staple length (measured in thirty-second’s of an inch) is 36.6, up from a 5-year average of 36.1 (Figure 41). The Southeast staple length of 36.6 is 0.7 thirty-seconds of an inch better than the 5-year average. In the Mid-South, the average staple length of 37.2 exceeds the 5-year average by 0.5 thirty-second’s of an inch. The Southwest’s average staple length of 36.0 exceeds the 5-year average of 35.8. The West reports an average staple length of 37.7, up 0.7 from the 5-year average.

Due to excessive rains during harvest, color grades for the 2018 crop are generally lower than in 2017. In total for the Cotton Belt, 76.5% of the 2018 crop is grading 41 or better as compared to 88.2% last year and the 5-year average of 85.9% (Figure 42). All regions fell below their five-year average in terms of color. At 71.1%, the Mid-South had the lowest percentage grading 41 or better in 2018 as compared to 95.8% in 2017. In the Southeast, 76.4% of the 2018 crop is grading 41 or better as compared to 96.0% in 2017. In the Southwest, 79.4% of the 2018 crop is grading 41 or better as compared to 96.0% last year.

The average strength of the 2018 upland crop is 30.0 grams per tex (gpt). The highest strength occurred in the West, with an average of 32.3 gpt, exceeding the 5-year average of 31.4. At 29.1 gpt, the Southeast is below the 5-year average of 29.4 gpt. The Southwest crop has an average strength of 30.3 gpt, which is higher than the 5-year average. In the Mid-South, an average strength of 29.9 gpt is 1.3 gpt below the 5-year average of 31.2 gpt.

The average micronaire of the 2018 upland cotton crop is 44.4, which is above the 5-year average of 43.4. In the Southeast, the average micronaire of 43.7 was below the 5-year average of 46.0. In the West, Mid-South and the Southwest, the average micronaire for the 2018 crop was slightly above the 5-year average.
Cottonseed Situation

Cottonseed Supply

The NCC estimate for 2018 cottonseed production is 5.7 million tons, down 707 thousand 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. Due to the quality issues with the 2018 crop, a seed-to-lint ratio of 1.27 was used to estimate 2018 cottonseed production.

For the 2018 crop, a regional breakdown of production shows that the Southwest produced 2.5 million tons or 44.0% of the total, the largest of any region (Figure 44). They were followed by the Mid-South with production of 1.4 million tons for a 25.0% share. The Southeast produced 1.3 million tons, or 23.0% of total production, and the West accounted for 458 thousand tons, 8.0% of the total.

Supplementing U.S. production, beginning stocks of 450 thousand tons bring total cottonseed supply for the 2018 marketing year to 6.2 million tons (Figure 45). Total supplies for 2018 are down by 657 thousand tons from the previous year. The 2018 total supply is 928 thousand tons higher than the 5-year average.

Disappearance and Stock Levels

The December 2018 USDA estimate for cottonseed disappearance shows a crush level of 1.8 million tons for the 2018 crop year (Figure 46). Whole seed feeding is estimated at 3.6 million tons.
As a result of lower supplies in 2018, cottonseed stocks are projected to drop to 375 thousand tons (Figure 47). If realized, this would be the lowest level of cottonseed ending stocks since 2009.

**2018 Cotton Prices**

**Upland Cotton Prices**

During the first half of 2018, the Nearby NY futures contract trended upward, reaching a high of 95 cents/lb. in mid-June (Figure 48). The nearby New York futures and the world cotton price, as measured by Cotlook Ltd.’s “A” Index maintained a relationship consistent with historical experience. The “A” Index was close to 101 cents/lb. in mid-June. Following the announcement of the first Chinese tariff list by President Trump on June 14, China immediately responded by announcing a 25% tariff on imports on a list of U.S. goods, which included cotton.

From June 12 to July 5, the Nearby NY futures contract dropped to 83 cents/lb.

Prices did rebound to 90 cents/lb. at the end of July following the U.S. announcement of the additional $200 billion tariff list. However, within a few weeks, prices declined by 8-9 cents/lb. and remained in the low 80’s until the end of September. Since the implementation of the 25% Chinese tariff on U.S. cotton, futures prices have continued to fall.

From October until mid-December, prices traded in a sideways pattern ranging between 75-80 cents/lb. Prices dropped further to a low of 71 cents on January 3. Over the last three weeks, prices have been trading between 72-74 cents/lb., with the A Index close to 83 cents/lb.

Thus far in the current marketing year (Aug-Jan), the Nearby NY futures contract has averaged 78.5 cents per pound. During the 2017 marketing year, the average Aug-Jan futures price was 72.6 cents per pound.

Spot prices in the U.S. followed a similar pattern to the futures market and the “A” Index. For the 2018 marketing year, spot prices averaged 76 cents/lb. from August to December. The average spot price in January 2019 was 68 cents per pound (Figure 49). The average spot 4134 value for
the 2017 crop cotton was 76 cents per pound.

**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. Cottonseed prices increased throughout 2018. The national average cottonseed spot price was $159 per ton in December 2017 and $204 per ton in December 2018. Prices increased a bit in January 2019 to $207 but have declined to $201 per ton in early February. On a regional basis, the early February spot price was $160 per ton in the Southeast, $168 per ton in the Mid-South, $223 per ton in the Southwest, and $305 per ton in the West.

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.

**ELS Cotton Prices**
For 2018, ELS prices declined throughout the year. ELS cotton prices began 2018 at $1.47 per pound and ended the year at $1.25 per pound (Figure 50). In addition to the impact of China’s retaliatory tariff, increased export competition from Egyptian cotton is pressuring ELS markets.
2019 Planting Intentions

In consideration of their 2019 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. Given the recent drop in oil prices, diesel fuel costs should be lower than 2018 levels. 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 2019 planting season, cotton harvest-time futures contracts are currently trading at slightly lower levels than last year. As of early February, the December 2019 contract was trading at $0.74 per pound, down 1-2 cents from year-ago levels (Figure 52).

Soybean prices, as measured by the Chicago Board of Trade November futures contract, have decreased relative to year-earlier levels. By early February, the November 2019 contract traded at $9.59 per bushel, approximately 42 cents lower than the November 2018 contract was trading a year earlier (Figure 54).

Corn prices declined throughout most of the 2018 marketing year but have been improving in the past few months. As of early February, the December 2019 contract for corn was trading at $4.02 per bushel, which is about 12 cents/bu. higher than a year ago (Figure 53).

Relative to average futures in the first quarter of 2018, average soybean prices during the 2019 survey period were down by 3.5%, corn prices were trading about 4.4% higher, and cotton prices were trading 0.3% higher. Corn is expected to provide some competition for soybean acres in 2019 acreage decisions.
2019 U.S. Cotton Acreage Intentions
In mid-December 2018 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 2018 and intended acreage for 2019. 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 cotton-to-corn price ratio is lower than in 2018 due to higher corn prices as compared to last year. The cotton-to-soybean price ratio is higher than in 2018 due to lower soybean prices.

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.

For the 2019 crop year, many producers have indicated a desire to reduce soybean acres due to low returns in 2018. As a result, corn is expected to provide the strongest competition for cotton acres in 2019. A review of the Council’s survey will begin with a look at the Southeast.

In the Southeast, survey results indicate a 2.6% decrease in the region’s upland area to 2.8 million acres (See Table 4 on page 47). All states except North Carolina and Virginia show a decline in acreage. In Alabama, the survey responses indicate a slight decrease (-0.6%) in cotton acreage as well as a reduction in corn, wheat, soybeans, and ‘other crops’. In Florida, respondents indicated less cotton and ‘other crops’, likely peanuts. In Georgia, cotton acreage is expected to decline by 3.6%. Georgia growers expect to plant more corn and ‘other crops’, likely peanuts. In North Carolina, a 0.1% increase in cotton acreage is expected. Acreage of corn and ‘other crops’ is expected to increase in North Carolina, while soybean and wheat acreage is expected to decline. In South Carolina, acreage is expected to decline by 5.4%. South Carolina growers expect to plant more corn and soybeans and less acreage of ‘other crops’. Cotton acreage is expected to increase by 3.5% in Virginia. Virginia growers intend to plant less soybeans and ‘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 2.3 million acres, an increase of 13.6% from the previous year. Survey results suggest that the increase in cotton acres can be attributed to a shift away from soybeans.

Across the region, all states intend to increase cotton acreage. Arkansas producers intend to plant 14.4% more cotton acreage and reduce soybeans and ‘other crops’. Arkansas growers also expect to increase corn acreage. The largest percentage increase was reported by Louisiana producers who expect to plant 22.2% more acreage in 2019. Louisiana growers expect to plant less corn and soybeans and more ‘other crops’. In Mississippi, respondents expect to plant 18.4% more cotton. Mississippi respondents expect to increase corn acreage and reduce soybeans and ‘other crops’. Missouri growers expect to increase cotton acres by 6.9% and plant less soybeans. In Tennessee, cotton acreage is expected to increase by 5.9% as land shifts away from soybeans and wheat. Tennessee
growers intend to plant more corn in 2019. All states in the Mid-South expect to plant less soybeans in 2019. All Mid-South states except Louisiana expect to increase corn acreage in 2019.

Growers in the Southwest intend to plant 8.8 million acres of cotton, an increase of 2.2%. Increases in cotton area are expected in all states in the region. In Kansas, producers intend to plant 3.4% more cotton acres in 2019. Kansas growers intend to plant more wheat and less ‘other crops’, likely sorghum. In Oklahoma, a 1.0% increase in cotton acreage is expected. Oklahoma growers also plan to increase acreage of wheat and ‘other crops’. Overall, Texas acreage is expected to increase by 2.3%. In south Texas, respondents indicate a 1.9% increase in cotton acreage. South Texas growers intend to plant less corn, wheat, and soybeans. Respondents from the Blacklands indicate a decrease of 10.8% in cotton acreage, a decrease in corn acreage, and an increase in ‘other crops’. In West Texas, respondents indicated a 2.9% increase in cotton acreage and an increase in ‘other crops’.

With intentions of 286 thousand acres, producers in the West are expected to plant 2.9% more acres of upland cotton. Cotton acreage is expected to increase in Arizona and California and decrease in New Mexico. The survey results for Arizona suggest a 1.0% increase in upland cotton acres and a decrease in all other crops. In California, growers intend to plant 14.4% more upland cotton acres and more ELS cotton and wheat.

Summing across the 4 regions gives intended 2019 upland cotton area of 14.2 million acres, 2.8% above 2018 (See Table 4 on page 47 and Figure 55).

The survey indicates that growers intend to plant slightly more ELS cotton in 2019. California growers are expecting to plant 9.7% more ELS cotton. Arizona growers are expecting to plant 19.9% less ELS cotton. Texas growers expect to plant 10.0% less cotton and New Mexico growers expect to reduce ELS cotton acreage by 1.4%.

Overall, U.S. cotton growers intend to plant 264 thousand acres in 2019. Summing together the upland and ELS cotton intentions shows U.S. all-cotton plantings in 2019 of 14.5 million acres, 2.9% higher than in 2018 (Figure 55).

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2019 U.S. Cotton and Cottonseed Supply
For the past five 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 2019. Production costs remain high and prices are still not high enough to cover all production expenses for many producers.

Based on the current prices of cotton and cottonseed, total revenue is expected to fall short of total costs. However, in the Southwest, cotton is still the better alternative and a significant increase in acreage is expected for Oklahoma and Kansas. Low grain prices along with above-average yields in 2018 will likely encourage more cotton acreage in the Southwest in 2019. Kansas had a tremendous increase in
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. However, due to the rainfall in the latter part of 2018 and early 2019, most regions currently have adequate moisture so the abandonment rates for Texas and Oklahoma are slightly lower than the recent 5-year average. Also, 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 10.1%, Cotton Belt harvested area totals 13.0 million acres (Figure 56). Using an average 2019 U.S. yield of 840 generates a cotton crop of 22.7 million bales, with 21.9 million bales of upland and 782 thousand bales of ELS.

Combining projected production with expected beginning stocks of 4.5 million bales and imports of 5 thousand bales gives a total U.S. supply of 27.2 million bales (Figure 57). This is an increase of 4.2 million bales from the 2018 level.

For cottonseed, multiplying the point estimate of lint production by an average lint-seed ratio generates expected production of 7.0 million tons. With 375 thousand tons of beginning stocks, 2019 cottonseed supply totals 7.4 million tons (Figure 58).
Table 4 - Prospective 2019 U.S. Cotton Area

<table>
<thead>
<tr>
<th>Region</th>
<th>2018 Actual (Thou.)</th>
<th>2019 Intended (Thou.)</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOUTHEAST</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alabama</td>
<td>510</td>
<td>507</td>
<td>-0.6%</td>
</tr>
<tr>
<td>Florida</td>
<td>118</td>
<td>111</td>
<td>-6.1%</td>
</tr>
<tr>
<td>Georgia</td>
<td>1,430</td>
<td>1,379</td>
<td>-3.6%</td>
</tr>
<tr>
<td>North Carolina</td>
<td>430</td>
<td>430</td>
<td>0.1%</td>
</tr>
<tr>
<td>South Carolina</td>
<td>300</td>
<td>284</td>
<td>-5.4%</td>
</tr>
<tr>
<td>Virginia</td>
<td>98</td>
<td>101</td>
<td>3.5%</td>
</tr>
<tr>
<td>MID-SOUTH</td>
<td>1,985</td>
<td>2,256</td>
<td>13.6%</td>
</tr>
<tr>
<td>Arkansas</td>
<td>485</td>
<td>555</td>
<td>14.4%</td>
</tr>
<tr>
<td>Louisiana</td>
<td>195</td>
<td>238</td>
<td>22.2%</td>
</tr>
<tr>
<td>Mississippi</td>
<td>620</td>
<td>734</td>
<td>18.4%</td>
</tr>
<tr>
<td>Missouri</td>
<td>325</td>
<td>347</td>
<td>6.9%</td>
</tr>
<tr>
<td>Tennessee</td>
<td>360</td>
<td>381</td>
<td>5.9%</td>
</tr>
<tr>
<td>SOUTHWEST</td>
<td>8,645</td>
<td>8,833</td>
<td>2.2%</td>
</tr>
<tr>
<td>Kansas</td>
<td>165</td>
<td>171</td>
<td>3.4%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>780</td>
<td>788</td>
<td>1.0%</td>
</tr>
<tr>
<td>Texas</td>
<td>7,700</td>
<td>7,874</td>
<td>2.3%</td>
</tr>
<tr>
<td>WEST</td>
<td>278</td>
<td>286</td>
<td>2.9%</td>
</tr>
<tr>
<td>Arizona</td>
<td>150</td>
<td>151</td>
<td>1.0%</td>
</tr>
<tr>
<td>California</td>
<td>50</td>
<td>57</td>
<td>14.4%</td>
</tr>
<tr>
<td>New Mexico</td>
<td>78</td>
<td>78</td>
<td>-0.6%</td>
</tr>
<tr>
<td>TOTAL UPLAND</td>
<td>13,794</td>
<td>14,186</td>
<td>2.8%</td>
</tr>
<tr>
<td>TOTAL ELS</td>
<td>248</td>
<td>264</td>
<td>6.3%</td>
</tr>
<tr>
<td>Arizona</td>
<td>14</td>
<td>11</td>
<td>-19.9%</td>
</tr>
<tr>
<td>California</td>
<td>210</td>
<td>230</td>
<td>9.7%</td>
</tr>
<tr>
<td>New Mexico</td>
<td>7</td>
<td>7</td>
<td>-1.4%</td>
</tr>
<tr>
<td>Texas</td>
<td>17</td>
<td>15</td>
<td>-10.0%</td>
</tr>
<tr>
<td>ALL COTTON</td>
<td>14,042</td>
<td>14,450</td>
<td>2.9%</td>
</tr>
</tbody>
</table>

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 2018 fell by approximately 6,200 workers. These figures represent employment in all three sectors of the U.S. textile industry - textile mills, textile product mills, and apparel mills.

Mill Use
Cotton mill use decreased from the previous year and is estimated at 3.2 million bales in calendar 2018, 0.9% below 2017 (Figure 59). For calendar 2019, NCC forecasts domestic mill use of cotton at 3.4 million bales. NCC projects domestic mill use of cotton at 3.4 million bales for the 2019 marketing year, slightly above the 2018 estimate of 3.3 (Figure 60). U.S. mills continue to be important and consistent customers of U.S. cotton. The U.S. textile industry is the single largest customer of U.S. cotton.

Upland Cotton Economic Adjustment Assistance Program
The Upland Cotton Economic Adjustment Assistance Program (EAAP), re-authorized in the 2018 Farm Bill, has provided U.S. cotton textile manufacturers with much-needed assistance for capital investments and improvements.

Under the EAAP, domestic users receive 3 cents per pound for all upland cotton consumed. Recipients must agree to invest the EAAP proceeds in plants and equipment. For fiscal year 2019, 43 U.S. companies were approved to receive payments under the EAAP.

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 2018 is estimated to be 18.3 million bale equivalents (Figure 61). For 2019, NCC projects net domestic consumption of cotton to increase to 18.7 million bales.
Imported goods make up the largest portion of U.S. net domestic consumption. Imported cotton textiles increased from 17.9 million bale equivalents in 2017 to an estimated 18.6 million in 2018 (Figure 62).

For textile imports, it is important to consider that a significant portion of imported goods contain U.S. cotton. Since much of what the U.S. exports to the NAFTA (North American Free Trade Agreement) 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 25.5% of all cotton goods imported in 2018 contained U.S. cotton. This is a 0.7% decrease over the previous year. In bale equivalents, these imported cotton goods contained 4.7 million bales of U.S. cotton (Figure 64). This is due, in large part, to our trading partners in NAFTA and the CBI.

Textile Trade
Imports of cotton goods in calendar 2018 were estimated to have increased by 3.3% to 18.6 million bale equivalents (Figure 63). In calendar 2019, NCC projects cotton textile imports to increase to 18.9 million bales.
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 12.9 million bale equivalents for 2018, up 3.5% from 2017. Imports of cotton home furnishings (including floor coverings) increased 3.0% in 2018 to an estimated 4.1 million bale equivalents. Cotton yarn, thread and fabric imports increased 10.1% in 2018 to an estimated 1.6 million bales.

Once again, countries in NAFTA and CBI represented significant sources of imported cotton goods in 2018 (Figure 66). Imports from Mexico in 2018 were estimated at 971 thousand bales, up approximately 5.5% from the previous year (Figure 67). Imports of cotton goods from Canada grew to an estimated 76 thousand bales in 2018, up 4.6% from the previous year (Figure 68). Imported cotton goods from CBI for the year were estimated at 2.2 million bale equivalents (Figure 69), down 4.3% 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 2018 were 1.9 million, or 87.4% of the cotton textile imports from CBI. Combined, imports from NAFTA and CBI countries decreased 0.8% and accounted for 17.3% of total U.S. cotton product imports in 2018.
Other top sources of imported cotton goods in 2018 were China, Pakistan, India, Hong Kong, Bangladesh, Vietnam, and South Korea. For the fourteenth 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 6.0 million bale equivalents in 2018, up 7.2% from 2017 and up by more than 630% from 2001 when China entered the WTO. China’s share of imported cotton goods in the U.S. market accelerated from 10.9% in 2004 to an estimated 32.5% in 2018.

Imports of cotton products from Pakistan are estimated at 1.5 million bale equivalents in 2018, an increase of 30 thousand bales. However, Pakistan’s share of imported cotton goods in the U.S. market decreased last year to 8.0%.

Imports from India stood at 1.4 million bale equivalents for 2018. This was a 24.0% decrease from last year. India now accounts for 7.7% of all U.S. cotton product imports.

Imports from Hong Kong in 2018 were 21 thousand bale equivalents, down 18.1% from 2017. Hong Kong’s share of imported cotton goods in the U.S. remained steady at 0.1% in 2018.

Bangladesh showed an increase in cotton product imports into the U.S. when compared to the previous year. Imports from Bangladesh in 2018 were up 10.4% from 2017 to 1.4 million bale equivalents. Bangladesh accounted for an estimated 7.7% of all cotton goods imported into the U.S. in 2018.

Vietnam showed an increase in cotton product imports into the U.S. when compared to the previous year. Total cotton product imports from Vietnam increased to an estimated 1.6 million bale equivalents in 2018, up 12.9% from 2017. Vietnam’s share of cotton goods imported into the U.S. in 2018 increased to 8.4%, up 0.1% from the previous year. Cotton product imports from South Korea decreased 5.2% from 2017 to 131 thousand bale equivalents in 2018.

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 2018. Cotton trousers remained the largest category of imported cotton goods from Mexico. Trousers accounted for 28.9% of all cotton product imports from Mexico based on SME (Figure 71). Knit cotton shirts were the next largest category of imports, accounting for 16.1%, followed by “other cotton apparel” (11.6%) and “other cotton manufacturers” (9.0%). 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.

**Canada**
U.S. cotton SME imports from Canada increased slightly in 2018. The largest category of imports from Canada in 2018 was “other cotton apparel”, which accounted for 26.8% of total SME of cotton product imports from Canada (Figure 72). The next largest category was “other cotton manufacturers” with 16.4% of total imports, followed by cotton coats at 3.9% and terry towels at 2.1%.

**Caribbean Basin Initiative (CBI)**
Continuing the trend, CBI countries shipped more cotton goods to the U.S. than did NAFTA countries in 2018. The largest category of imported cotton goods from the region was knit shirts, accounting for 47.7% of total imports, based on SME (Figure 73). Approximately 87.5% of the cotton knit shirt imports from CBI came from the CAFTA-DR countries. Underwear, the second largest category, accounted for 27.7% of imports, followed by cotton trousers (11.3%) and cotton hosiery (5.7%). Of these imports, 90.6% of the underwear, 81.5% of the cotton trousers and 100.0% of the cotton hosiery were from the CAFTA-DR countries.
African Growth & Opportunity Act (AGOA)

Over the past year, total cotton apparel product imports from the AGOA region increased by 17.7% to an estimated 128.4 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 increased from 98.3% to 98.4%.

Pakistan

The largest category of imported goods from Pakistan in 2018 was “other cotton manufactures” (Figure 75). This category accounted for 45.7% of all cotton product imports from Pakistan based on SME. The second largest category imported from Pakistan was cotton sheets with 11.5% of total imports, followed by bedspreads and quilts (9.0%) and terry towels (4.8%).

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 2018 was “other cotton manufactures”, which accounted for 24.2% of all cotton product imports from that country (Figure 76). Trousers was the second largest category, comprising 13.9% of total cotton product imports from that country. Nightwear accounted for 5.4% of U.S. cotton textile and apparel imports from China in 2018. “Other cotton apparel” was the fourth largest category and accounted for 5.0% of cotton product imports.

India

As was the case with Pakistan and China, the largest category of imported cotton
goods from India in 2018 was the category of “other cotton manufactures” (Figure 77). When based on SMEs, this category represented 33.3% of all cotton goods imported from India. The next largest category was cotton sheets (13.8%), followed by knit shirts (5.0%) and underwear (4.9%).

**Hong Kong**
The largest category of imported cotton goods from Hong Kong in 2018 was “other cotton manufacturers” (Figure 78). When looking at SMEs, “other cotton manufacturers” accounted for 23.3% of all cotton products imported. The second largest category was cotton trousers with 17.5% of imports, followed by cotton dresses (9.9%) and “other cotton apparel” (7.2%).

**Bangladesh**
Based on SMEs, the largest category of cotton goods imported from Bangladesh in 2018 (37.5%) was trousers (Figure 79). The second largest category in 2018 was woven shirts (13.6%). Cotton underwear was the third largest category in 2018, representing 13.5% of total cotton goods imported from Bangladesh, followed by knit shirts at 8.0%.

**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 over 6,500% based on SME since 2001. In 2001, the U.S. imported 24.3 million SME of cotton goods from Vietnam. This number increased to an estimated 1.6 billion SME in 2018. The
largest category of imported cotton goods from Vietnam in 2018 was trousers. Based on SMEs, this category represented 26.2% of all cotton goods imported from Vietnam. The next largest category was knit shirts (17.8%), followed by underwear (16.7%) and nightwear (6.8%).

**South Korea**

Based on SMEs, the largest category of cotton goods imported from South Korea in 2018 was combed cotton yarn, which accounted for 50.8% (Figure 81). The second largest category in 2018 was cotton sheeting fabric (23.1%), cotton hosiery (12.0%) and cotton gloves and mittens (3.4%).

**Turkey**

Based on SMEs, the largest category of cotton goods imported from Turkey in 2018 was cotton sheets, which accounted for 20.5% (Figure 82). The second largest category in 2018 was “other cotton manufactures” (20.2%), followed by terry towels (8.9%) and cotton trousers (8.2%).

**U.S. Cotton Product Exports**

Exports of U.S. cotton textile and apparel products decreased in 2018 (Figure 83) by 2.6% to an estimated 3.4 million bale equivalents. This decrease was due to a decline in exports of all three major categories of cotton yarn, thread and fabric, home furnishings and apparel (Figure 84). Exports of cotton yarn, thread, and fabric decreased by 2.2% to 3.1 million bale equivalents. Exports of cotton apparel decreased by 6.2% in 2018 to 277 thousand bale equivalents. Exports of home furnishings (including floor coverings) decreased by 1.2% over the previous year to an estimated 105 thousand bale equivalents. For 2019, NCC projects U.S. cotton textile exports to increase 52 thousand bales to 3.5 million bale equivalents.
The top customers of exported U.S. cotton textiles and apparel in 2018 were once again the NAFTA and CBI countries (Figure 85). Exports to the NAFTA countries last year totaled an estimated 740 thousand bale equivalents, down 2.9% from the previous year.

Exports to the region accounted for 21.5% of all U.S. cotton product exports. Exports to Mexico increased to an estimated 550 thousand bale equivalents from 527 thousand in 2017. Cotton product exports to Canada declined by an estimated 19.0% to 190 thousand bale equivalents for 2018. U.S. exports to the CBI countries declined last year. In 2018, exports decreased 1.9%, totaling 2.2 million bale equivalents or 62.9% of all U.S. cotton exports. Approximately 98.1% of the cotton products exported to CBI went to the CAFTA-DR countries.
World Market Situation

For this outlook, the ultimate outcome of the trade tensions between the United States and China is a significant wildcard impacting the global market. Based on the positive statements resulting from the recent negotiations, the NCC assumes that the additional tariffs being imposed by the two countries will be removed in advance of the 2019 marketing year. With exact timing unknown, the ultimate resolution is not assumed to have a significant impact on the balance sheet for the 2018 marketing year. However, the assumed resolution plays a significant role in the balance sheet for the 2019 marketing year.

World cotton prices, as measured by Cotlook Ltd.’s “A” Index, ranged between 80.6 to 101.7 cents per pound during the course of calendar year 2018 (Figure 86). For the current marketing year-to-date, the “A” Index has averaged 87.8 cents per pound, 5.3 cents higher than the previous marketing year.

World cotton production declined in 2018 to an estimated 118.1 million bales (Figure 87). India and China remain the leading producers followed by the U.S., Brazil, and Pakistan. The U.S. crop of 18.7 million bales was 2.2 million bales lower than in 2017.

World consumption is expected to exceed production in 2018. The latest world production estimate of 118.1 million bales is 6.5 million bales lower than projected mill use of 124.6 million bales. Ending stocks are projected to fall to 73.6 million bales in the 2018 marketing year, resulting in a stocks-to-use ratio of 59.0%.

For the 2019 marketing year, world area is projected to increase by 5.6% to 86.1 million acres, which is the 2nd highest acreage level since the 2004 marketing year. In 2011, world area increased to a record 89.1 million acres in response to the large increase in cotton prices. World production is estimated to increase by 7.4 million bales in 2019 to 125.5 million bales, which would be the highest level since the 2011 crop. World consumption is projected to increase to a record 127.4 million bales in 2019. Ending stocks are projected to decline by 2.2 million bales in the 2019 marketing year to 71.4 million bales, resulting in a stocks-to-use ratio of 56.0%.

China

China remained one of the largest cotton producers in 2018 with 27.0 million bales.
(Figure 88). The crop estimate is 500 thousand bales lower than in 2017 due to a slight reduction in yields. China had a record yield of 1,571 pounds per acre in the 2017 marketing year. Prior to 2015, China was the largest cotton producer. China reduced acreage and production from 2011 through 2016 as cotton shifted out of the lower-yielding areas and into Xinjiang. China increased acreage in 2017 following two years with very low cotton acreage and maintained a similar level in 2018. However, the 2018 level of 8.3 million acres is still 40.2% below the 2007-2012 average. Looking ahead, China’s cotton acreage is expected to remain fairly stable. Large increases in acreage are not expected in Xinjiang due to limited water availability.

However, Xinjiang continues to be the country’s major cotton production base. The weather conditions in Xinjiang continue to be an advantage for cotton farming. Along with the favorable weather conditions, the government’s “Target Price-based Subsidy” policy program (for 2017 to 2019) guarantees basic cotton profits which are expected to stimulate continuous cotton production in Xinjiang. The target price is fixed at RMB18,600 ($2,900)/ton for MY17/18 through MY19/20. The subsidy program stipulates that cotton planted in uncertified areas will remain ineligible to receive support payments in Xinjiang, and the yearly volume of cotton eligible for the subsidy is capped by the central government at 5.47 MMT. Nevertheless, cotton continues to be the most reliable income crop in Xinjiang. However, there are a few limiting factors Xinjiang farmers consider when deciding how much cotton to plant. Some of these factors include the government’s call for restructuring the crop mix along with limited water resources. Furthermore, a fixed government’s target price means that the subsidy rate will not reflect any increases in production costs for crops years 2017 to 2019. This could hinder profits unless increases in production costs can be offset by other factors such as yield gain.

For cotton-producing provinces outside of Xinjiang, increased plantings continue to be challenged by increases in labor costs (as almost 100% of harvest is hand-picked) and stagnant yields. Cotton planting in these regions is also impacted as farmers have more crop choices such as corn and more work opportunities available in cities within the Yangtze River and the Yellow River regions.

Weather conditions and the use of new technologies, including biotech cotton varieties, continue to be key factors in improving yield gains. The use of biotech cotton varieties to reduce pest-related losses will continue to dominate in the provinces within the Yangtze River and the Yellow River regions. However, weather uncertainties in these regions, such as flooding or drought, frequently delay harvest, affect fiber quality, and impact yields. A 2019 crop of 26.1 million bales is projected, down 881,000 bales from 2018 due to a reduction in area. The initial planting intentions survey carried out by the China Cotton Association indicated a 2.7% decline in cotton area in 2019, while a survey by the Xinjiang Development and...
Reform Commission suggests an increase in cotton acreage in 2019.

Although China’s consumption has increased over the past four years, domestic use remains well below historical highs. China’s overall increase in demand for textile and apparel products is driven by population growth and urbanization along with higher disposable income and rising living standards. According to China’s National Statistics Bureau (NSB), from 2011 to 2015, China’s average annual net population growth was 6.8 million. The government’s amendment to the “one child policy” in 2016 pushed net population growth to 8.2 million in 2016 and 7.4 million in 2017. This growing trend is expected to continue in 2019 and beyond.

Additionally, rapid urbanization continues with annual urban population growth averaging 20.4 million from 2011 to 2016, and 20.5 million new urban residents added in 2017. However, the gap between urban and rural residents in per capita clothing expenditures continues to be wide. As rural incomes grow, the market potential for China’s 576.6 million rural residents to increase textile related purchases is expected to rise. This will undoubtedly support continued demand for domestic cotton products.

Despite the growing population and consumer income, the textile industry faces significant challenges, including higher cotton prices compared to other competitors, rising production costs for key inputs such as land, electricity, and labor in eastern provinces. In addition, environmental pressure (emission limits) particularly in eastern China also discourage the expansion of facilities. In search of lower raw material and labor costs, and a more favorable investment environment, some industry leaders have moved their operations to China’s central and western regions (Xinjiang, Henan, Anhui, and Jiangxi Provinces) and to foreign countries (Vietnam and Cambodia). China’s industry is also reportedly investing in spinning facilities in the United States, Vietnam and other South East Asian countries. To address these ongoing hurdles, the Chinese textile industry continues to restructure.

For the 2018 crop year, a slight decline in China mill use is expected due to a slowdown in the Chinese economy and the ongoing U.S.-China trade dispute. China is projected to consume 40.7 million bales in 2018. Assuming a resolution to the U.S.-China trade dispute, China is expected to increase mill use in 2019 to 41.5 million bales. While an increase in cotton mill use is expected for the 2019 marketing year, continued growth in cotton demand is still impacted by competition from lower priced manmade fibers. Between 2009 and 2013, China’s mill use declined by almost 16 million bales as high cotton prices relative to manmade fibers forced spinners to turn away from cotton. Although internal cotton prices are still strong relative to polyester prices, polyester prices did increase in 2018. The recent focus on plastic pollution across the world has had a negative impact on the production and use of manmade fibers. Polyester prices are expected to decline in 2019 due to lower oil prices.

The gap between China’s cotton consumption and production is currently around 14 million bales. From 2015-2018, the gap was filled with reserve sales and a small level of imports. Over the last four years, China reduced their total ending stocks from 66.4 million bales in the 2015 marketing year to an estimated 31.2 million bales in the 2018 marketing year, which is now considered to be nearing a more normal level. For the 2018 crop year, China is expected to increase net cotton imports to 6.9 million bales.
Prior to the implementation of tariffs, the U.S. industry was in a prime position to take advantage of the increase in Chinese imports. In the absence of retaliatory tariffs, China was expected to purchase approximately 3 million bales of U.S. cotton in the 2018 marketing year. Prior to the current trade tensions, that strong buying pace was expected to continue in view of China’s growing demand for cotton, declining stockpiles, and their gap between domestic production and consumption.

Due to the continuation of the 25.0% tariff, China has turned to other suppliers during the 2018 marketing year. 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 United States, 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 Australia, Brazil, and the United States. For China, cotton imports from Australia, Brazil, and the U.S. are comparable since the cotton is machine-picked and higher quality. In the last two marketing years (August-July), the average market share of Chinese imports for the U.S., Australia, and Brazil was 45.3%, 20.5%, and 5.3%, respectively.

Based on the latest import data for the 2018 marketing year (Aug-Dec), the share of Chinese imports for Australia, Brazil, and the U.S. is 40.0%, 20.6%, and 12.2%, respectively. Due to seasonality, Australia and Brazil generally have a higher market share of Chinese imports at this point in the marketing year. From 2012-2017, the average market share from August-December was 33.1% for Australia, 11.2% for Brazil, and 20.1% for the United States. The data clearly indicates an increase in market share for Australia and Brazil and a decrease for the United States.

The adjustments in China’s supply and demand result in a reduction in stocks, down to an estimated 31.2 million bales by the end of the 2018 marketing year. 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. Based on recent USDA estimates, current state reserve stocks are about 13 million bales and are projected to decline further by the end of the 2018/19 crop year. However, free stocks are currently much higher than in recent years and are estimated to be 18-20 million bales.

Based on recent statements from Chinese government officials, the state reserve level may be maintained at about 11.5 million bales. The release of an additional 3.6 million bales of sliding-scale import quota suggests that net sales from the state reserves in 2019 will likely be lower than in recent years. Due to the high level of free stocks, it is unclear if China will import more cotton to fill the reserves in the 2018 crop year.

With further stock reductions projected to be less pronounced, China’s imports are expected to increase in the 2019 crop year. Net imports are projected at 11.1 million bales. With a resolution to the U.S.-China trade dispute, the U.S. is expected to export more cotton to China in the 2019 marketing year and gain back some market share.

Stocks are projected to fall by another 4.3 million bales during the 2019 marketing year to 26.9 million bales. If realized, stocks would be down almost 40.0 million bales from the 2014 peak.

**India**

The latest estimates have India producing 27.0 million bales for the 2018 marketing year (Figure 89). If these estimates hold, the 2018 crop will be 2.0 million bales lower.
than the 2017 crop as a result of reduced yields. For the past 3 years, India has surpassed China as the largest cotton producer. For the 2018 crop year, India and China are both expected to produce 27.0 million bales.

India accounts for about one-third of global cotton area. Within India, two-thirds of cotton is produced in the central cotton growing zone; including, the states of Maharashtra, Madhya Pradesh, Gujarat and Odisha where much of the crop is rain fed. The northern zone, which consists of the states of Punjab, Haryana and Rajasthan, produces cotton under irrigated conditions and accounts for about 15.0% of production. In the south, the states of Andhra Pradesh, Karnataka and Tamil Nadu account for 30.0% of production. 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. With the area under Bt cotton and improved varieties now reaching an estimated 92.0% of total area, prospects for future growth in productivity are limited as most cotton is grown under rain-fed conditions and on small farms. Cotton plant populations are relatively low in density in India because farmers leave rows large enough to traverse with a bullock and cultivator for weed control purposes. Lower plant populations are offset to some extent by the multiple pickings farmers obtain through manual, rather than machine, harvesting.

Researchers are working on production schemes with higher plant populations that could improve yields. There are an estimated 5.8 million cotton farmers with the average farm size of 1.5 hectares (roughly four acres). Small land holdings seem to 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. Since 2013, yields have become more stagnant, and as a result, production has been stable to declining.

India announced a large increase in the minimum support price (MSP) for the 2018/19 crop year to provide farmers a profit of 50.0% over the cost of production. The Indian government has promised to double farmers’ income by 2022. The MSP for medium staple cotton was increased by 28.0% to 72.5 cents per lb, while the MSP for long staple cotton was increased by 26.0% to 76.7 cents per lb. The recent decline in international prices has increased the likelihood that the Cotton Corporation of India will procure cotton under the MSP program, which could limit India’s
exportable supplies. On January 16, the price of medium staple Punjab J-34 cotton was 75.7 cents per lb and the price of long stable Shankar-6 cotton was 76.9 cents per lb. With lower production, India is expected to export 4.3 million bales in the 2018 crop year.

For 2019, acreage and production are expected to increase assuming yields are in line with recent averages. Production is projected to increase to 28.0 million bales in 2019.

Domestic mill consumption has been growing in recent years with additional capacity added in many cotton-growing states. This growth has been championed by favorable textile policies at the federal and state levels of government. Another trend has been forward integration by ginners that set up small spinning units to focus on production of cotton and blended yarns. The fiber share in textile mill consumption is heavily skewed in favor of cotton (73.0%) as compared to man-made fiber (27.0%). However, volatile cotton prices, weak demand, and cheaper man-made fibers are pushing consumption towards more blends and cotton waste.

Competition for cotton from MMF has become more pronounced in recent years with a buildup of capacity in India. Within the segment of MMF, polyester is by far the most dominant fiber type. Price volatility and high cotton prices compared to MMF has led to a certain level of demand destruction. Additionally, there is an increase in sales of active wear and functional sportswear. Infrastructure issues, capital costs, and central and state taxation at the fiber level make MMF a costly option for textile mills as there are only a few large players operating in the MMF sector.

While the national textile policy discusses fiber neutrality, the Government of India (GOI) has set schemes geared towards promoting natural fibers. There are signs that consumption is rising and mill use is expected to reach significant volumes in the next five years as younger generations are adapting to newer fashion styles.

For the 2019 crop year, with continued government support and ample supplies of cotton, India’s mill use should increase slightly to 25.8 million bales in the 2019 marketing year. In 2019, India’s exports are expected to increase to 4.6 million bales due to increased production and higher world trade.

India’s stocks are projected to drop to 7.4 million bales in the 2019 marketing year. However, it is important to note that some trade analysts still estimate India’s stock levels to be lower than the USDA projections even with the historical revisions in 2018.

In terms of the global trade picture, government policies in India will play a role in the outlook for the coming year. India is expected to continue as a net exporter. The government of India has enacted a variety of trade policies to ensure that competitively-priced and adequate supplies of cotton are available to the textile industry. India’s national fiber policy affirms that cotton exports should be limited to an exportable surplus. China and Bangladesh remained the top export markets for Indian cotton yarn, while Bangladesh, Sri Lanka and South Korea are the top export destinations for cotton fabric.

**Uzbekistan**

Current estimates put Uzbek cotton production at 3.2 million bales for 2018 (Figure 90). The current production estimate is lower than earlier estimates due to adverse weather conditions in 2018. Cotton has been the cash crop in Uzbekistan for generations...
and a significant source of employment and foreign exchange.

The government of Uzbekistan (GOU) continues to maintain tight control over all aspects of cotton production, including planting area, production targets, prices, inputs, procurement and marketing. The GOU is moving along with the recent plan to carry out structural reforms in agriculture and the economy. Accordingly, the Republic of Uzbekistan continues to take steps to reduce the cotton planted area each year. The intention of the government is to reduce planting in areas where field yields are lower than the country average, such as in highly salinized areas and mountain regions, and to facilitate production of other crops instead, including fruits and vegetables, potatoes, as well as grains.

Cotton planting area will be reduced gradually until 2020 to lower targeted domestic production to about 3.0 MMT of seed cotton, compared to 3.4 MMT of earlier years. The initiative will take a total of 185,000 hectares (roughly 457,000 acres) of land from cotton planting and allocate to other crops.

Uzbekistan has an extensive cotton seed breeding and research program. Regarding seed varieties, in recent years, about half of the planted seeds are early-ripening types, such as Sultan and Namangan -77, as these varieties have better yields and resistance to various common diseases. About one-third of the rest of the varieties will be mid-ripening, such as Bukara 6 and Bukara 8, and the rest are new varieties such as Parlak.

For the 2019 marketing year, Uzbek cotton production is projected to climb slightly to an estimated 3.4 million bales as improved yields more than offset lower area.

The most important recent trend in the cotton sector in Uzbekistan is the rapid and continued growth in domestic consumption. According to government sources, presently about 500 enterprises are engaged in textile production in Uzbekistan. The Uzbek government is encouraging new partnerships to increase the use of cotton domestically. New textile investments are approved and that will increase domestic consumption in the coming years. Accordingly, the Uzbek government plans to invest about US$1 billion between 2015 and 2019 to modernize and diversify the textile industry and an additional US$2.2 billion will be invested until 2022 to increase domestic textile production. At the same time new investments are coming in, existing mills are increasing their capacity as well. Industry sources estimate that about half of the domestic consumption is by the top twenty mills.

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. Accordingly, starting from the 2018 marketing year, thirteen enterprises were approved to work under the project and about 140,000 hectares (roughly 346,000
acres) of land will be planted to cotton under the experiment.

As a result, Uzbek domestic cotton consumption is estimated at 2.7 million bales in the 2018 marketing year. For 2019, Uzbekistan’s mill use is projected to increase to 2.9 million bales.

The Uzbek government initiative to move cotton trading to an electronic platform starting from calendar year 2018 has been delayed. Presently Uzpakhtasanoat is responsible for receiving and processing raw cotton and exports of cotton fiber. Uzpakhtasanoat is reported to offer cotton from various cotton terminals in the country, although in small quantities. China and Bangladesh continue to be the main markets for Uzbek cotton. Uzbekistan will likely remain a net exporter of cotton for the foreseeable future, but with declining volumes. For 2018, Uzbekistan is expected to export 650 thousand bales. For the 2019 marketing year, net exports are projected at 600 thousand bales.

**Pakistan**

Pakistan mainly produces medium staple cotton. Lint quality continues to be an issue within the industry, and the quality of the picking and ginning results in varying bale sizes and high levels of foreign matter. Additionally, farmers often plant multiple varieties as a hedge against poor germination rates.

There are several factors that could affect yields, some positive and some negative. Factors weighing against improved yields include: 1) 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; 2) Pakistan’s continued reliance on a back-crossed 15-year-old biotechnology event means that crops are susceptible to bollworms; 3) “Sucking insects” such as white fly continue to spread cotton leaf curl virus and other plant diseases that affect yields and require farmer vigilance; and 4) Cotton seed quality is a perpetual issue with low germination rates and weak certification.

Factors that are supportive of yields include: 1) The major cotton-producing provinces of Punjab and Sindh have approved or are expected to soon approve 8-10 new seed varieties that seem to be liked by farmers and supplies of certified seed are up to 55.0% of all cottonseeds from 45.0% a year ago; 2) 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. They are also increasingly attuned to the damage of “sucking” insects; 3) The government continues to heavily subsidize the supply of fertilizer, water, and power for farmers; and 4) Firmer prices encourage more pickings and input usage.

In 2018, cotton production was estimated at 7.3 million bales as pest problems continue to plague Pakistan’s farmers. An increase in production is expected for the upcoming marketing year based on the assumption of increased harvested acres and better yields. Assuming normal weather conditions and lower pest infestation, production is projected to be 7.8 million bales in 2019 (Figure 91). However, it is important to note that Pakistan continues to face Bt-resistant boll worms, and the ability to address this issue will have a significant bearing on production.
Consumption is largely unchanged over the past decade but is expected to increase slightly in 2019 to 10.7 million bales. Cotton continues to face competition from other 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 employs 10.0 million people according to the Pakistan Economic Survey 2016-17. The integrated cotton and textile sector includes 1,200 ginneries, 523 textile units, and 400 cottonseed crushers and oil refiners. China’s increased investment in Pakistan’s energy and infrastructure sectors could help to spur future growth in the 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. Demand for better quality fabrics for the export market and specialized products for the domestic market are growing. Thus, Pakistan’s textile industry is expected to increasingly rely on imported long staple and quality cottons to produce high quality textile products.

On January 15, 2019, the Pakistan Economic Coordination Committee of the Cabinet (ECC) approved the withdrawal of the customs duty and sales tax on cotton imports. The withdrawal is effective from February 1 – June 30, 2019 to ensure an adequate supply of cotton to the domestic textile industry.

Pakistan is expected to increase net cotton imports for the 2019 marketing year to 2.9 million bales.

**Turkey**

Production grew to 4.3 million bales in 2018 (Figure 92). For 2019, production is projected to be slightly lower at 4.2 million bales due to lower harvested area.

Turkey has a large textile industry capacity driving the demand for cotton, and due to low domestic cotton production and the slow pace of the GAP development project, the country will continue to import cotton for years to come.

The textile industry continues to be one of the most important sectors for the Turkish economy, accounting for 8.0% of GNP, 16.0% of industrial employment, and 16.0% of total exports. Turkish textile mills continue to renew their technology with new equipment to remain competitive in international markets. Accordingly,
investments by the Turkish textile industry since 1985 are estimated to be more than US$90 billion. Presently, Turkey’s production capacity is estimated to reach 7.5 million spindles and 700,000 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 than their competitors. Other factors are also influencing the Turkish textile market. The increasing youth population, migration to urban areas and rapid growth in number of shopping malls with textiles stores has significantly increased the total volume of textiles sold in the Turkish domestic market. The total number of shopping malls with textile stores increased two-fold during the last ten years, reaching 350 in 2017, of which about 100 of them are in Istanbul. This growth had a major contribution to domestic textile sales. Another influencing factor is tourism. In recent years, increases in tourism from neighboring Middle Eastern countries also contributed to local sales of textiles. Additionally, Turkish textile producers are increasing their number of stores in export markets, such as the Middle East, North Africa and Europe, to expand in the markets where they are already present. The upward export trend in traditional export markets such as Europe and Russia, along with new markets such as Iran, will help to support domestic cotton consumption.

Despite the imposition of the 3.0% AD duty, Turkey has continued to be a large export market for U.S. cotton and has been one of the top 3 export markets for the past decade. However, in the first half of 2018, the Turkish Lira crashed. From mid-July to mid-August, the Lira lost almost half of its value against the U.S. dollar. This led to reductions in mill use and reductions in cotton imports. For the 2010-2017 marketing years (including the entire marketing year and the year-to-date totals), the average market share of U.S. exports to Turkey was about 13.0%. Based on the latest export report as of December 20, 2018, export commitments to Turkey of 485 thousand bales represent 4.4% of total commitments. The average volume of export commitments at this point in the marketing year in the last three years was 860 thousand bales.

In the last few months, the Turkish economy has stabilized a bit and the Lira/USD exchange rate is now back to 5.2 per USD. The Lira/USD exchange rate was 3.8 per USD on January 1, 2018, 4.9 per USD on July 24, and dropped to a 2018 low of 6.9 per USD on August 13. Some cotton spinners have now reentered the market for cotton imports so U.S. exports to Turkey could increase in the last few months of the 2018 marketing year. It is also likely that additional sales to Turkey occurred during the government shutdown and will be reported in the coming weeks.

For 2018, Turkey’s mill use and imports are expected to be lower than in 2017 as the economy continues to recover. For 2019, Turkey’s mill use is projected to increase slightly to 6.9 million bales. Turkey is projected to have net imports of 2.7 million bales, slightly higher than the 2018 crop year.

Australia
Current estimates put Australia’s cotton production at 2.5 million bales for the 2018 marketing year (Figure 93) due to reduced acreage and yields. The 2018 drought is one of the worst droughts on record in Australia with exceptionally warm temperatures.

Assuming a return to more normal weather patterns, Australia’s acreage is projected to increase in 2019 resulting in production of 4.2 million bales. If the current drought and
heat conditions continue into the fall, 2019 acreage and production would likely be lower than the current projections.

Australia is one of the world’s largest exporters of raw cotton with roughly 95.0% of the domestic crop exported. The leading markets for Australian exports of cotton include China, Bangladesh, Vietnam, and India. For the 2018 marketing year, net exports are estimated to reach 3.6 million bales. With production of 4.2 million bales during the 2019 marketing year, net exports are expected to climb to 3.7 million bales.

Brazil
Brazil is projected to have a record level of production of 11.0 million bales for the 2018 marketing year (Figure 94). Cotton acreage increased by 19.0% in 2018 which is the highest level since the 2010 marketing year.

Based on relative prices of cotton and soybeans, acreage is expected to increase by another 10.0% in 2019 to 3.8 million acres, resulting in another record level of production of 12.0 million bales. As a result of higher production, Brazil has the opportunity to become a much larger exporter in the world market, particularly with the ongoing U.S.-China trade dispute and the projected increase in Chinese imports. Brazil has already captured Chinese market share from the United States as China has turned to Brazil for more cotton imports in 2018.
Brazilian mill use for the 2018 marketing year increased slightly to an estimated 3.5 million bales when compared to the previous year. Brazilian cotton consumption is expected to climb in the 2019 marketing year with mill use estimated at 3.6 million bales.

In terms of trade, Brazil is expected to reach net exports of 5.9 million bales of cotton in the 2018 marketing year. For the 2019 marketing year, net exports are expected to climb to roughly 7.3 million bales.

**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 planting season for cotton generally begins in June; the harvest starts in September/October and ends in November. Ginning mills collect cotton from October/November to March. Spurred by increased area and improved yields, cotton production in 2018 is an estimated 5.9 million bales.

Cotton producers in the region include Burkina Faso, Mali, Cote d’Ivoire, Chad, and Senegal. Despite the obstacles facing cotton producers in these countries, and the other cotton producing countries 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 5.6 million bales in 2019 (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 2018 marketing year, net exports of 5.4 million bales are projected. For 2019, West African net exports are expected to climb to 5.5 million bales, providing increased competition for U.S. cotton exports.

![Figure 95 - West Africa Cotton Supply & Use](chart)

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.

**Mexico**

Mexican cotton production for marketing year 2018 climbed to an estimated 1.7 million bales. A sharp increase in area and stable yields contributed to recovery from the 2016 harvest, which was the lowest since the 2009 crop year.

With an increase in acres estimated for 2019, production remains stable with an estimated crop of 1.7 million bales (Figure 96).
In terms of consumption, Mexico’s outlook remains basically unchanged. Marketing year 2018 mill use is estimated at 2.0 million bales. For the 2019 marketing year, Mexican mill consumption is projected to remain unchanged at 2.0 million bales.

Mexico is looking to diversify its imports with countries that offer zero tariffs, like Argentina, Brazil, Greece, and Italy. Under the Trans-Pacific Partnership, Mexico is interested in developing a commercial relationship with Australia in the future. The United States, however, should remain the main supplier of cotton to Mexico which accounts for almost 100.0% of Mexico’s total cotton imports.

Net imports dropped to an estimated 300 thousand bales during the 2018 marketing year. Mexico’s net imports are expected to continue to fall to roughly 252 thousand bales for the 2019 marketing year.

**Indonesia**

Indonesian cotton production is estimated to be 3 thousand bales for the 2018 marketing year (Figure 97). Current projections show this number unchanged for 2019.

Indonesian spinners rely heavily on imported cotton. Operational practices require cotton spinners to maintain two months of stocks on hand plus one month of on the way stocks in order to maintain uninterrupted production. (This contrasts with manmade fiber spinners who typically hold two weeks of stocks on hand plus one week of on the way stocks). Spinners report an advantage from importing cotton from suppliers with shorter shipping times. As a result, if not because of price competitiveness, compared with Australian and African shipping times, US exports to Indonesia tend to be at a disadvantage.

Indonesian cotton consumption in marketing year 2019 is estimated to increase to 3.7 million bales, while net imports are also expected to increase to 3.7 million bales.

**Vietnam**

For the 2018 marketing year, Vietnam’s cotton production is estimated to be 3 thousand bales with production estimates unchanged for the 2019 crop (Figure 98).
Vietnam’s textile and garment sector is steadily growing and remains one of the country’s top export industries, significantly contributing to the country’s Gross Domestic Product (GDP) growth. The Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP), signed on March 8, 2018, will offer an opportunity for Vietnam’s textile and garment industry to grow in the coming years. Prior to this trade deal, Vietnam was already the second largest exporter of textile and garment products to CPTPP countries, behind China. When CPTPP enters into force, Vietnam’s garment and textile industry expects to benefit through increased export revenue, especially to Canada, Mexico, and Peru, the three CPTPP members with which Vietnam does not yet have a free trade agreement (FTA).

Vietnam’s spinning sector is comprised of about 100 spinning mills with about 8.5 million spindles (equivalent). Investment inflow from both foreign and domestic sources into the textile and garment industry in general, and the spinning sector specifically, is likely to continue in the coming years. Foreign Direct investment (FDI) into Vietnam is expected to increase and capture opportunities fueled by ongoing FTAs and the recently approved CPTPP. Estimates place 2018 marketing year mill use at 7.5 million bales. Growth continues into the 2019 marketing year with consumption climbing to 8.0 million bales.

In order to keep pace with this rising cotton demand, Vietnam will remain a net importer for the foreseeable future. The country’s top five cotton suppliers include the United States, India, Brazil, Australia, and Cote d’Ivoire. These countries make up 70 to 80% of the total cotton supply to Vietnam. For the 2018 marketing year, Vietnam’s net imports are estimated to be 7.6 million bales and estimates are higher for the 2019 marketing year at 7.9 million bales.

**Bangladesh**

Marketing year 2018 cotton production in Bangladesh totaled 135 thousand bales (Figure 99). Upland cotton is planted in July-August and harvested in December-January. Hill cotton is planted in March-April and harvested in December-January. Cotton production is vulnerable to excessive rainfalls/floods and pest infestations which are common in Bangladesh. With that in mind, production for the 2019 marketing year is expected to fall to an estimated 125 thousand bales.

In terms of consumption, marketing year 2018 mill use was estimated at 8.0 million bales and an increase is expected in the 2019
marketing year with an estimate of 8.3 million bales.

As a result of increasing demand for quality cloth, raw cotton imports have steadily grown. Net imports have increased to an estimated 8.1 million bales for the 2018 marketing year and are projected to increase in 2019 to roughly 8.2 million bales.

**United States Trade**

For the 2018 marketing year, net U.S. exports of raw cotton are estimated to be 15.1 million bales (Figure 100). The reliance of the U.S. cotton market on exports has increased dramatically over the past 16 years as the domestic textile industry has contracted. It is estimated that exports will constitute more than 80.0% of total use for the 2018 marketing year.

Customers of U.S. exports have changed in recent years. Mexico remains one of the top customers, along with Pakistan, Vietnam, Indonesia and, China (Figure 101).

<table>
<thead>
<tr>
<th>Top U.S. Raw Cotton Export Destinations</th>
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<tr>
<td><strong>Country</strong></td>
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<tr>
<td>China</td>
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<td>Turkey</td>
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<td>Mexico</td>
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<td>Vietnam</td>
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<td>Thailand</td>
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With the assumption of a resolution to the U.S.-China trade dispute, net exports are projected to increase to 17.4 million bales in the 2019 marketing year.

Without a resolution, U.S. exports would still be expected to increase in the 2019 marketing year due to an increase in world trade, primarily due to China. While the U.S. would be expected to capture a lower percentage of the Chinese market share, exports to other countries would likely increase due to a shift in world trade. As other countries increase cotton exports to China, they would have less available to export, which means that the U.S. could pick up some additional market share in other cotton importing countries.

However, it is important to note that any further escalation in trade tensions between the U.S. and China would result in more disruptions in world trade. The implementation of additional tariffs, such as a tariff on Chinese apparel imports, would likely impact global cotton demand as well as U.S. cotton exports.

**World Trade**

In the 2018 marketing year, world cotton trade climbed to roughly 41.8 million bales (Figure 102). Current projections put 2019 marketing year world cotton trade at 45.9
million bales. As previously discussed, U.S. exports are projected to be 17.4 million bales in the 2019 marketing year.

For 2019, cotton imports are projected to increase in most of the major cotton importing countries. (Figure 103).

Examining the world trade-to-mill use ratio for the 2018 marketing year shows a slight increase to 33.5% from 33.3% in 2017 (Figure 104). For 2019, the ratio is expected to climb to 36.1%.

World Ending Stocks
For the 2019 marketing year, ending stocks are estimated to fall to 71.4 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.

The projected world stocks-to-use ratio falls to 56.0% for the 2019 marketing year (Figure 106). Although global stocks are projected to fall, stocks outside of China are expected to increase. Declining global stocks would normally be supportive of prices, but in this case, the changing disposition of stocks could signal pressure on prices.
Figure 106 - World Cotton Stocks vs Price