

# *The Economic Outlook* FOR U.S. COTTON 2016

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## Summary

Over the course of 2015, cotton futures remained relatively stable, even though oil prices plummeted and other commodity prices declined. World cotton production fell while consumption stayed relatively flat, resulting in the first drop in ending stocks since 2009. The cotton market continues to be influenced by uncertainty in government policies, developments in other commodity markets, and a changing macroeconomic climate. Many of those influences will carry over into the outlook for 2016. Growth in world cotton demand remains a key concern as excessive stocks and competition from lower priced manmade fibers weigh on the 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.

To recap the current marketing year, U.S. producers planted 8.6 million acres of cotton in 2015, a decrease of 22.3% from the previous spring. The reduced acres were primarily the result of lower cotton prices relative to grains and oilseeds.

In south Texas, many growers were unable to plant due to excessive rainfall during planting time. North Carolina, South Carolina, and Virginia suffered losses due to heavy rains and severe flooding immediately prior to harvest time, with the largest yield impacts in South Carolina. In California, prolonged drought conditions led to severe water restrictions, limiting available irrigation water and reducing cotton acreage. The impact of the various weather issues was not only a loss in yields but also a significant reduction in the quality of the 2015 cotton crop.

According to USDA's January 2016 estimates, with only 5.9% of U.S. cotton

acres un-harvested, the resulting 2015 crop of 12.9 million bales marked a 3.4 million bale decrease from 2014.

The current marketing year began with cotton stocks at 3.7 million bales. When added to the recent harvest, total supplies for the 2015 marketing year are estimated at 16.6 million bales. Total supplies will be more than sufficient to satisfy estimated use of 13.3 million bales.

U.S. textile mills are expected to consume 3.6 million bales in the current marketing year, up 25 thousand bales from 2015 and marking the fourth consecutive year of increased consumption. The Economic Adjustment Assistance Program (EAAP), continues to be an important source of stability allowing mills to invest in new facilities and equipment.

U.S. exports are estimated to be 15.5% lower in 2015 at 9.5 million bales. The current NCC estimate is below the January 2016 USDA estimate but may yet prove to be a bit optimistic. The mid-January total export sales for the current marketing year are the lowest mid-January level since the 2001 marketing year. To reach 9.5 million, the weekly pace will need to increase throughout the remainder of the marketing year. Although exports are down, the U.S. will remain the largest exporter of cotton. World trade is declining due to sharply lower imports by China, with the underlying reasons to be discussed in more detail.

The current U.S. export estimate breaks down into just over 9.0 million bales of upland cotton and 475 thousand bales of ELS cotton.

The current supply and demand estimates generate 3.6 million bales of ending stocks

in the U.S. balance sheet, down 100,000 bales from the previous year.

With that review in mind, the projections for the 2016 marketing year will begin with the outlook for U.S. production. As in past years, the prospects for the U.S. crop are based on the results of the NCC planting intentions survey with assumptions made for abandonment and yields. Survey respondents are asked to give their plantings of cotton, corn, soybeans, wheat, and other crops for 2015 and intended acreage for 2016. As always, the survey results should be viewed as a measure of grower intentions prevailing at the time the survey was conducted. During the survey period, the cotton December futures contract averaged just under 65 cents per pound, which is very similar to year-ago levels. However, corn and soybean prices are 10-12% below year-ago levels, so price ratios of cotton to competing crops are a bit more favorable than in 2015.

In the Southeast, survey results indicate a 5.1% decrease in the region's upland area to 2.1 million acres. Across the six states, the results are mixed with increased acreage in Alabama and Florida and a decrease for the other four states. In Alabama, the survey responses indicate more cotton and corn and less wheat and soybeans. Florida's acreage is almost exclusively moving away from peanuts into more cotton. In Georgia, cotton acreage is expected to decline by 5.0% with corn and soybeans pulling acres from cotton. In South Carolina, acreage is expected to decline by 13.5% as cotton acres shift to corn and soybeans. In North Carolina, the shift is to corn, soybeans, wheat, and 'Other Crops' while corn benefits from the modest decline in Virginia.

In the Mid-South, growers have demonstrated their ability to adjust acreage based on market signals, in particular, the relative prices of competing crops. This

year's survey results are no different with growers intending to plant 1.2 million acres, an increase of 24.9% from the previous year. Across the region, all states are expected to increase cotton acreage. In Arkansas, Louisiana, and Mississippi, the respondents indicate a reduction in wheat, soybeans and 'Other Crops'. In Missouri, cotton acreage is expected to increase while acreage of corn, soybeans, and 'Other Crops' is expected to decline. In Tennessee, acreage of corn, wheat, and 'Other Crops', likely sorghum, is expected to move into cotton.

Growers in the Southwest intend to plant 5.3 million acres of cotton, an increase of 6.1%. Increases in cotton area are expected in each of the three states. In Kansas, land is shifting away from wheat, soybeans, and 'Other Crops', likely grain sorghum. In Oklahoma, an increase in acreage is expected as wheat acreage declines. Overall, Texas acreage is expected to increase by 5.6%. A slight decrease in acreage in the Blacklands and less than a 1.0% decline in west Texas acreage is offset by a large increase in south Texas. In south Texas, respondents indicate a significant increase in cotton acreage as land shifts away from wheat, soybeans, grain sorghum, and cotton reclaims some land that was idled due to excessive moisture in 2015. Respondents from the Blacklands are moving predominantly to corn and soybeans. In west Texas, little to no change is expected in cotton acreage while acreage of all other crops increases slightly as more acreage comes into production.

With upland intentions of 213 thousand acres, producers in the West are expecting to plant 24.4% more acres of upland cotton. Arizona is responsible for the large increase, with California and New Mexico acreage down slightly. The survey results for Arizona suggest a shift from wheat, soybeans, and 'Other Crops' to cotton. Arizona growers are also expecting to plant

34.8% more ELS cotton. In New Mexico, the responses indicate a shift to ELS cotton.

Summing across the 4 regions gives intended 2016 upland cotton area of 8.9 million acres, 5.7% above 2015. The survey indicates that growers intend to plant more ELS cotton in 2016, in some cases due to expectations of increased water allocations, and in other instances, due to reductions in upland cotton. Overall, U.S. cotton growers intend to increase ELS plantings 31.2% to 208 thousand acres in 2016. Summing together the upland and ELS cotton intentions shows U.S. all-cotton plantings in 2016 of 9.1 million acres, 6.2% higher than 2015.

For the past two years, U.S. cotton producers have struggled with low cotton prices, high production costs, and the resulting financial hardships. With current futures markets indicating steady prices, the economic situation for producers is not likely to improve in 2016. Some producers will find it very difficult to obtain production financing for the current year.

Given the economic climate, it is important to discuss the factors driving an increase in cotton acreage in 2016. The increase in Texas is the result of a large acreage increase in south Texas, as cotton acreage not planted in 2015 due to excessive moisture is coming back into production. In the West, the increase in acreage is driven by increased water availability as well as weakness in other commodity markets. In the Mid-South, lower prices of competing commodities is the main factor influencing acreage. While the percentage increase in Mid-South acreage is substantial as compared to other regions, it is important to note that planted cotton acreage in 2015 was a record low. Also, in some areas of the Mid-South, cotton acreage was not planted in 2015 due to excessive moisture. In addition, the Mid-South region is more

responsive to changes in relative prices of competing crops due to the favorable growing conditions and high yield potential for a variety of crops. In some areas of the Mid-South as well as in Texas, sorghum acreage increased in 2015 but is projected to decline in 2016 due to lower prices along with major pest issues for the 2015 crop.

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. The potential for a strong El Nino weather pattern could lead to higher than average rainfall throughout the Cotton Belt which could impact yields and quality. However, since the NCC economic outlook does not attempt to forecast weather patterns, the standard convention is to assume yields in line with recent trends and abandonment consistent with historical averages. However, it is important to remember the volatility around projected production given the uncertainty of weather patterns.

With abandonment set at 11.0% for the U.S., Cotton Belt harvested area totals 8.1 million acres (Figure 56). Using an average 2016 U.S. yield of 830.6 pounds generates a cotton crop of 14.0 million bales, with 13.4 million bales of upland and 595 thousand bales of ELS. The projected crop represents a 1.1 million bale increase from the latest 2015 estimate.

Turning attention to demand for U.S. cotton, a slight increase in consumption by the domestic textile industry is projected in the 2016 marketing year. U.S. mill use is projected to grow by 50 thousand bales, bringing the total to 3.65 million bales. Textile trade estimates for 2016 suggest that the overwhelming majority of products manufactured by the U.S. textile industry will move into export markets for further processing.

International markets, the primary outlet for U.S. raw fiber production, remain very competitive, with competition from not only growths of other cotton, but also manmade fibers. To fully assess the prospects for 2016 cotton exports, it is important to review the expectations for key importing and exporting countries.

In the past few years, the U.S. and world cotton markets have experienced several notable changes. On the demand side, the most significant change is the drastic reduction in Chinese imports since 2012. This has contributed to the decline in U.S. exports experienced in the 2015 marketing year. However, the U.S. is still the largest cotton exporter, followed by India. Reduced U.S. exports to China have been partially offset by increases in exports to Vietnam, Mexico, and Bangladesh.

In 2015, China announced that import quotas would be limited to the required WTO minimum tariff rate quota (TRQ) of 4.1 million bales. A similar stance is expected for the 2016 crop year. Considering the massive stockpiles of cotton and expectations for limited quota, China's imports are expected to fall further in 2016 to 4.75 million bales.

China has also made significant changes in cotton policy and is no longer the world's largest cotton producer. Starting in 2015, India surpassed China as the largest cotton producing country. For the past four years, China has been reducing cotton acreage and production. In 2015, overall cotton area declined by 23.0% and production was at the lowest level since 2000.

The *Beijing Cotton Outlook* has projected another 8.0% decline in acreage for 2016, which is a 5.0% reduction in Xinjiang and 13.0% in other provinces. Although a target price of roughly \$1.40 per pound is assumed to continue for 2016, acreage is expected to

decline due to lower cotton prices, as well as preferential grain policies. With an 8.0% expected reduction in cotton acreage, a 2016 crop of 21.9 million is projected.

Despite being the largest spinner of cotton, China's demand remains a concern as domestic use struggles to recover. Between 2009 and 2013, China's mill use fell by almost 16 million bales as high cotton prices relative to manmade fibers forced spinners to turn away from cotton. In the current marketing year, China's internal cotton price has continued to drop, thus narrowing the gap between China's domestic price and the price of imported cotton. However, at close to \$0.90, internal cotton prices are still more than twice the level of polyester prices as those prices have also weakened. As a result, cotton mill use in China is expected to show a slight reduction in the current marketing year, as well as a further decline in 2016. Unfortunately, government policies, and their impacts on China's prices, are not allowing either cotton production or demand to adjust to a market-driven level, and imports are reduced as a result.

The adjustments in China's supply and demand will allow a modest reduction in stocks, down 5.6 million bales to 58.9 million. The stocks remain a burden on the 2016 cotton market.

While much uncertainty remains regarding China's massive stockpile, the China Textile Association recently indicated that a portion of the reserves will be released in April 2016 to meet the demand of domestic cotton textiles companies. The Chinese government is expected to release a larger amount than in earlier auctions and the price will be driven by the domestic and world markets. Increased sales of Chinese reserve stocks could lead to more domestic spinning of cotton and reduce China's imports of cotton yarn. However, until there is further clarity on China's future policy direction, the NCC

does not incorporate any major change in the management of reserves, thus contributing to the further decline in domestic consumption for 2016.

Turkey, the second largest export market for U.S. cotton is also being impacted by government actions. In this case, the action is a self-initiated antidumping (AD) investigation of imports of U.S. cotton launched by Turkey in October 2014. A review by NCC staff of publicly available price data indicates no evidence of dumping, and public statements by Turkey's Minister of Economy suggest that the investigation is conducted in retaliation of U.S. investigations of imported steel products from Turkey.

Regardless of the motivations, the investigation is ongoing and having a detrimental impact on sales to Turkey due to the uncertainty of not knowing when or if a duty will be imposed. Nearing the end of the six month extension granted in the fall of 2015, the investigation should be concluded by late March. For this economic outlook, NCC assumes that the investigation results in no duty applied to imports of U.S. cotton. Whether this is a valid assumption will depend on the outcome of the investigation, but this assumption is appropriate for two reasons. First, this assumption is supported by the economic analysis of available data. Second, this assumption allows the outlook to serve as a baseline projection against which alternative duties could be evaluated.

Even with a successful conclusion of the investigation, Turkey's textile industry continues to face a challenging environment. Turkish mills are concerned that political unrest in neighboring countries will limit demand for their textile products. In late December 2015, the Turkish government announced a 30.0% increase in the minimum wage. While the government has announced intentions to assist companies in

covering 40.0% of the increase, the higher wages will lead to additional costs for textile mills. As a result, Turkey's mill use is projected to show a slight reduction in 2016. Weaker grain prices relative to cotton are expected to increase cotton production, and Turkey is projected to import 3.75 million bales, slightly lower than in 2015.

Although world mill use showed only a slight increase in 2015, cotton mill use outside of China is growing at a faster pace and world consumption is projected to increase by 1.0% in 2016. The growth is leading to additional cotton import demand in key countries such as Vietnam and Bangladesh. Further growth projected for the coming year is lending support to better trade numbers for the U.S.

In terms of the global trade picture, government policies in India will play a role in the outlook for the coming year. India currently has a Minimum Support Price (MSP) program for cotton. In previous years, a significant amount of India's production moved into government stocks when market prices were below the MSP. However, India's internal price has increased over the past year and is currently above the MSP price.

India recently announced a change to the MSP program. Instead of physical procurement of cotton, the central government will directly transfer cash to farmers based on the difference between the market price and the MSP. Initially, the new program will be offered as a pilot program in a few regions.

India's cotton acreage is projected to increase slightly in 2016 as internal cotton prices have strengthened while grain prices have weakened. The resulting production reaffirms India's position as the largest producing country. India's domestic use of cotton is projected to continue to grow,

leading to a reduction in exports. For the 2016 marketing year, India is expected to export 5.4 million bales.

As the net effects of the trade adjustments are aggregated together, world cotton trade for 2016 is estimated at 35.7 million bales, down from 36.1 million in 2015. The United States is expected to capture approximately 29.0% of world trade by exporting 10.2 million bales in the upcoming year.

When exports are added to U.S. mill use, total offtake is 13.8 million bales. Recall that the U.S. crop is estimated at 14 million bales, thus leading to an increase in ending stocks of 193 thousand bales.

For the world balance sheet, global production increases as larger crops in the U.S., India, and Pakistan offset the 1.9 million decline in China's production. At 105.4 million bales, the projected crop is 3.8% higher than in 2015. World mill use is projected to increase to 112.1 million bales, exceeding production by 6.7 million bales. Although cotton's share of world fiber demand has been declining, total cotton consumption has been slowly increasing for the past 5 years.

World cotton stocks decline in the 2016 balance sheet, but the decline of 6.3 million bales does little to reduce global inventories that begin the year at 103 million bales. While projections of global consumption exceeding production would normally be supportive of prices, the implications for the coming year may not be as clear cut. The

majority of the decline in global stocks is due to reduced inventories in China. An aggressive approach by China to reducing stocks would have bearish implications for world prices, particularly if the increased availability of reserve cotton reduced China's demand for imported cotton yarn.

Stocks outside of China – an important barometer of price conditions – are projected to decrease by 682 thousand bales. Global markets should find support in a stocks-to-use ratio outside of China projected to be the lowest in recent years.

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. Sluggish cotton demand, smaller imports by China, weakness in other commodity markets, and a stronger dollar created a bearish climate for U.S. and world cotton prices.

Based on the underlying assumptions and resulting cotton balance sheet, many of the same factors remain in play for the coming year. However, recent experience has shown that market conditions can change quickly. As with any projections, there are always uncertainties and assumptions that can dramatically change the balance sheet.

We still face a number of uncertainties in cotton mill use, particularly as the global economy struggles. With competitive prices, growth in cotton mill use will occur, but look for that growth to be largely outside of China.



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

	<b>10/11</b>	<b>11/12</b>	<b>12/13</b>	<b>13/14</b>	<b>14/15</b>	<b>15/16</b>	<b>16/17</b>
<b>World</b>							
Harvested Area (Thou Acres)	83,305	89,196	85,052	81,027	84,073	76,658	77,203
Yield (Pounds/Acre)	678	686	699	713	680	636	655
Production (Thou Bales)	117,630	127,420	123,875	120,406	119,151	101,556	105,429
Trade (Thou Bales)	36,263	45,458	47,564	41,279	35,712	36,074	35,753
Mill Use (Thou Bales)	115,509	104,104	108,382	109,924	110,400	110,939	112,101
Ending Stocks (Thou Bales)	51,336	74,416	91,741	103,072	112,066	102,857	96,575
<b>United States</b>	<b>10/11</b>	<b>11/12</b>	<b>12/13</b>	<b>13/14</b>	<b>14/15</b>	<b>15/16</b>	<b>16/17</b>
Harvested Area (Thou Acres)	10,699	9,461	9,321	7,544	9,348	8,078	8,107
Yield (Pounds/Acre)	812	790	892	821	838	769	831
Production (Thou Bales)	18,102	15,573	17,314	12,909	16,319	12,943	14,028
Net Exports (Thou Bales)	14,367	11,695	13,016	10,517	11,234	9,490	10,185
Mill Use (Thou Bales)	3,900	3,300	3,500	3,550	3,575	3,600	3,650
Ending Stocks (Thou Bales)	2,600	3,350	3,800	2,350	3,700	3,600	3,793
<b>Australia</b>	<b>10/11</b>	<b>11/12</b>	<b>12/13</b>	<b>13/14</b>	<b>14/15</b>	<b>15/16</b>	<b>16/17</b>
Harvested Area (Thou Acres)	1,433	1,619	1,100	1,077	507	704	800
Yield (Pounds/Acre)	1,407	1,631	2,008	1,827	2,179	1,636	1,856
Production (Thou Bales)	4,200	5,500	4,600	4,100	2,300	2,400	3,094
Net Exports (Thou Bales)	2,500	4,640	6,168	4,852	2,393	2,750	3,150
Mill Use (Thou Bales)	40	40	40	40	35	35	35
Ending Stocks (Thou Bales)	2,762	3,807	2,399	1,807	1,779	1,494	1,503
<b>Bangladesh</b>	<b>10/11</b>	<b>11/12</b>	<b>12/13</b>	<b>13/14</b>	<b>14/15</b>	<b>15/16</b>	<b>16/17</b>
Harvested Area (Thou Acres)	86	89	99	104	106	111	117
Yield (Pounds/Acre)	355	464	524	532	542	540	535
Production (Thou Bales)	64	86	108	115	120	125	131
Net Imports (Thou Bales)	4,250	3,400	5,000	5,300	5,400	5,750	5,883
Mill Use (Thou Bales)	4,200	3,700	4,700	5,300	5,500	5,850	6,000
Ending Stocks (Thou Bales)	992	768	1,166	1,271	1,281	1,296	1,300
<b>Brazil</b>	<b>10/11</b>	<b>11/12</b>	<b>12/13</b>	<b>13/14</b>	<b>14/15</b>	<b>15/16</b>	<b>16/17</b>
Harvested Area (Thou Acres)	3,459	3,459	2,224	2,768	2,520	2,286	2,400
Yield (Pounds/Acre)	1,249	1,207	1,295	1,388	1,333	1,365	1,354
Production (Thou Bales)	9,000	8,700	6,000	8,000	7,000	6,500	6,769
Net Exports (Thou Bales)	1,297	4,763	4,242	2,083	3,886	4,250	3,603
Mill Use (Thou Bales)	4,300	4,000	4,100	4,200	3,600	3,350	3,200
Ending Stocks (Thou Bales)	7,906	7,993	5,801	7,668	7,332	6,382	6,498
<b>China</b>	<b>10/11</b>	<b>11/12</b>	<b>12/13</b>	<b>13/14</b>	<b>14/15</b>	<b>15/16</b>	<b>16/17</b>
Harvested Area (Thou Acres)	12,973	13,591	13,096	11,861	10,872	8,401	7,729
Yield (Pounds/Acre)	1,129	1,201	1,283	1,325	1,324	1,360	1,360
Production (Thou Bales)	30,500	34,000	35,000	32,750	30,000	23,800	21,900
Net Imports (Thou Bales)	11,857	24,478	20,280	14,096	8,213	5,300	4,500
Mill Use (Thou Bales)	46,000	38,000	36,000	34,500	33,000	32,500	32,000
Ending Stocks (Thou Bales)	10,603	31,081	50,361	62,707	67,920	64,520	58,920
<b>India</b>	<b>10/11</b>	<b>11/12</b>	<b>12/13</b>	<b>13/14</b>	<b>14/15</b>	<b>15/16</b>	<b>16/17</b>
Harvested Area (Thou Acres)	27,527	30,146	29,652	28,911	31,382	29,158	29,741
Yield (Pounds/Acre)	474	462	461	515	451	461	465
Production (Thou Bales)	27,200	29,000	28,500	31,000	29,500	28,000	28,812
Net Exports (Thou Bales)	4,800	10,480	6,574	8,586	2,973	4,800	4,419
Mill Use (Thou Bales)	20,550	19,450	21,750	23,250	24,500	25,000	25,497
Ending Stocks (Thou Bales)	11,549	10,619	11,795	11,459	13,486	11,686	10,582



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

	10/11	11/12	12/13	13/14	14/15	15/16	16/17
<b>Indonesia</b>							
Harvested Area (Thou Acres)	22	22	25	22	15	7	6
Yield (Pounds/Acre)	540	648	583	540	291	324	359
Production (Thou Bales)	25	30	30	25	9	5	4
Net Imports (Thou Bales)	2,490	2,495	3,132	2,984	3,338	3,093	3,122
Mill Use (Thou Bales)	2,600	2,450	3,050	3,050	3,250	3,150	3,125
Ending Stocks (Thou Bales)	354	429	541	500	597	545	547
<b>Mexico</b>							
Harvested Area (Thou Acres)	274	474	383	304	447	321	350
Yield (Pounds/Acre)	1,281	1,194	1,298	1,473	1,466	1,420	1,430
Production (Thou Bales)	732	1,180	1,036	933	1,366	950	1,043
Net Imports (Thou Bales)	971	660	725	880	665	825	892
Mill Use (Thou Bales)	1,700	1,700	1,800	1,850	1,850	1,900	1,950
Ending Stocks (Thou Bales)	595	710	646	584	740	590	550
<b>Pakistan</b>							
Harvested Area (Thou Acres)	6,919	7,413	7,413	7,166	7,289	6,919	7,050
Yield (Pounds/Acre)	599	686	602	636	698	500	628
Production (Thou Bales)	8,640	10,600	9,300	9,500	10,600	7,200	9,218
Net Imports (Thou Bales)	763	-260	1,350	690	385	2,350	1,079
Mill Use (Thou Bales)	9,900	10,000	10,750	10,400	10,600	10,000	10,300
Ending Stocks (Thou Bales)	2,520	2,835	2,710	2,475	2,835	2,360	2,331
<b>Turkey</b>							
Harvested Area (Thou Acres)	791	1,211	1,013	815	1,063	914	975
Yield (Pounds/Acre)	1,281	1,364	1,256	1,354	1,446	1,391	1,400
Production (Thou Bales)	2,110	3,440	2,650	2,300	3,200	2,650	2,844
Net Imports (Thou Bales)	3,204	2,082	3,474	4,042	3,439	3,550	3,510
Mill Use (Thou Bales)	5,600	5,600	6,050	6,300	6,400	6,400	6,400
Ending Stocks (Thou Bales)	1,319	1,241	1,315	1,357	1,596	1,396	1,349
<b>Uzbekistan</b>							
Harvested Area (Thou Acres)	3,336	3,336	3,336	3,212	3,175	3,175	3,175
Yield (Pounds/Acre)	604	576	662	613	590	559	560
Production (Thou Bales)	4,200	4,000	4,600	4,100	3,900	3,700	3,704
Net Exports (Thou Bales)	2,650	2,500	3,200	2,700	2,450	2,300	2,105
Mill Use (Thou Bales)	1,250	1,350	1,450	1,500	1,550	1,575	1,600
Ending Stocks (Thou Bales)	1,248	1,398	1,348	1,248	1,148	973	972
<b>Vietnam</b>							
Harvested Area (Thou Acres)	22	27	20	7	2	2	2
Yield (Pounds/Acre)	475	424	413	389	583	583	583
Production (Thou Bales)	22	24	17	6	3	3	3
Net Imports (Thou Bales)	1,569	1,625	2,410	3,200	4,300	5,200	5,978
Mill Use (Thou Bales)	1,625	1,675	2,250	3,200	4,100	5,100	5,900
Ending Stocks (Thou Bales)	341	315	492	498	701	804	885
<b>West Africa</b>							
Harvested Area (Thou Acres)	3,388	4,722	5,935	6,215	6,514	6,669	6,750
Yield (Pounds/Acre)	322	326	344	337	377	353	350
Production (Thou Bales)	2,275	3,206	4,250	4,365	5,116	4,909	4,922
Net Exports (Thou Bales)	2,078	2,491	3,914	4,130	4,330	5,213	4,893
Mill Use (Thou Bales)	168	167	146	149	144	144	144
Ending Stocks (Thou Bales)	561	1,109	1,299	1,385	2,027	1,579	1,463

## U.S. and World Economy

In the early weeks of 2016, many of the uncertainties that have plagued the global economy in recent years are still prevalent in the current macroeconomic environment. The International Monetary Fund January 2016 *World Economic Outlook* noted that while global growth is projected to pick up slightly in 2016, growth prospects will continue to be impacted by the slowdown and rebalancing of the Chinese economy, distress in some large emerging market economies, lower energy and commodity prices, and a tightened monetary policy in the United States.

The Wells Fargo Securities January 2016 *Monthly Outlook* echoed similar concerns for the global economy. Overall, the 2016 view of the global economy is not much different than last year, with the exception of expected increases in the federal funds rate by the U.S. Federal Reserve. A higher interest rate coupled with the current low inflation environment could exacerbate the weak economic growth. The Eurozone is expected to continue to grow at a sluggish pace and a further slowdown in Chinese economic activity is anticipated. However, Wells Fargo economists note that “consumer demand will likely remain supported by low petroleum and gasoline prices, just as it was during last year.”

While there are concerns about current economic conditions, positive expectations for 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 inched forward in January for the fourth consecutive month. The index is designed to gauge the attitudes of the American consumer with regards to the economy.

For January 2016, the preliminary index increased slightly to 93.3, up from 92.6 in December (Figure 1). A low inflation rate is expected to offset a decline in expected wage gains leading to the highest inflation-adjusted income expectations in nine years. An increase of 2.8% in real personal consumption expenditures is expected in 2016.

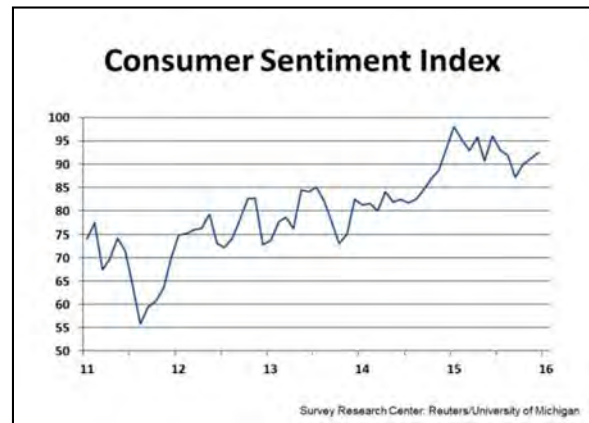


Figure 1 - Consumer Sentiment Index

### U.S. Gross Domestic Product

As determined by the Bureau of Economic Analysis (BEA), the U.S. 2015 third quarter real Gross Domestic Product (GDP) increased by 2.0% (Figure 2), following on gains of 3.9% 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, exports, state and local government spending and residential fixed investment. Imports, which are a subtraction in the calculation of GDP, increased.

Real GDP growth slowed in the third quarter due to a drop in private inventory investment, as well as slower growth in exports, PCE, nonresidential fixed investment, and state and local government spending.

The Wells Fargo economic outlook projected a fourth quarter number of 0.4% and a 2015 rate of 2.4%. Overall, growth in 2015 was similar to the previous year despite the huge drop in oil prices which resulted in lower energy exploration and related investment. However, weakening foreign demand and a stronger dollar hurt the sectors of the U.S. economy that are closely tied to the global economy. The growth is expected to gain some momentum in 2016 with a projected GDP growth of 1.9% in the first quarter and a 2.0% annual growth rate. Several of the headwinds facing the economy for the past few years are expected to lessen in the current year.

Energy prices are not expected to drastically decrease in 2016, so increased household purchasing due to lower oil prices should offset the negative impacts of decreased energy production. Fiscal policy is expected to be more supportive of growth in 2016 as a result of the modest gains in defense and non-defense discretionary outlays contained in the federal budget deal.

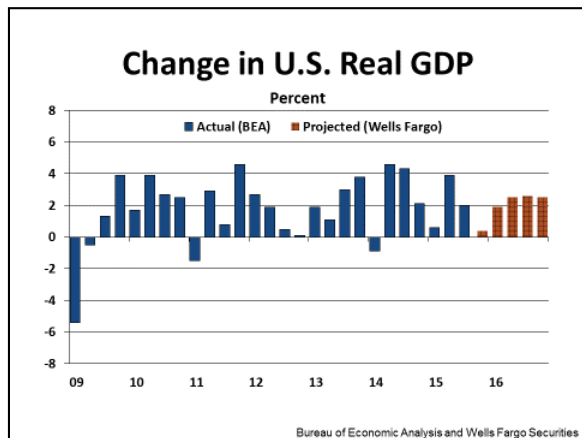


Figure 2 - Change in U.S. Real GDP

The latest IMF projections take a similar tone regarding U.S. GDP growth with expansion of 2.5% in 2015, followed by 2.6% growth in 2016. Expectations for continued growth and resiliency are supported by still-easy financial conditions and strengthening housing and labor

markets, but the strength of the dollar is weighing on manufacturing activity and lower oil prices have reduced investment in mining structures and equipment.

U.S. real personal consumption expenditures (PCEs) expanded in the third quarter of 2015 by 3.0% (Figure 3), compared with an increase of 3.6% in the second quarter. Durable goods increased 6.6%, compared with an increase of 8.0%. Nondurable goods increased 4.2%, compared with an increase of 4.3%. Services increased 2.1%, compared with an increase of 2.7%.

The latest outlook by Wells Fargo puts the fourth quarter growth in PCEs at 2.0%. For 2016, PCEs are projected to grow at 2.7% per quarter.

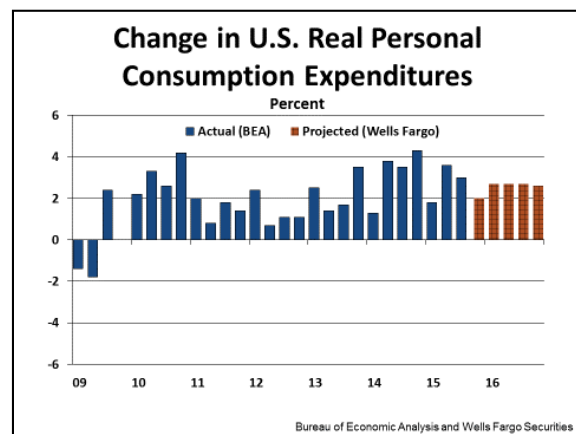


Figure 3 - Change in U.S. Real Personal Consumption Expenditures

## U.S. Employment

Although still well below pre-recession levels, the 2015 U.S. jobs market experienced its best performance of the current economic recovery. In December 2015, civilian employment stood at 59.5% of the population (Figure 4), up 0.5% from year-earlier levels. 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.

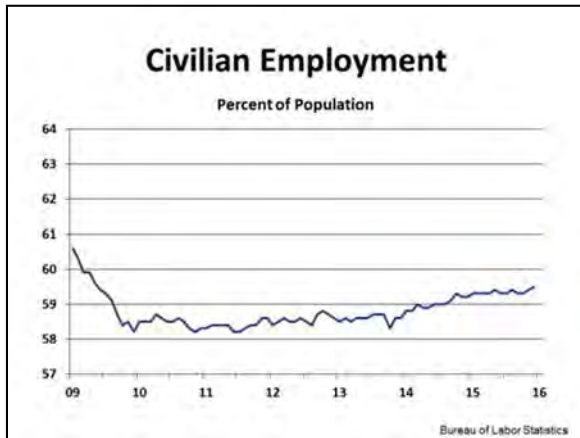


Figure 4 - Civilian Employment

Total nonfarm payroll employment increased by 292,000 in December. For 2015 as a whole, job growth totaled 2.7 million, compared with 3.1 million in 2014.

Employment in professional and business services rose by 73,000 in December. In 2015, professional and business services added 605,000 jobs, compared with a gain of 704,000 in 2014. Construction added 45,000 jobs, the third consecutive month of strong job growth. In December, employment in food services and drinking establishments increased by 37,000, while health care added 39,000 jobs.

Manufacturing employment changed little in December, though nondurable goods added 14,000 jobs. Employment in wholesale trade, retail trade, financial activities, and government changed little in December. Mining employment continued to decline.

According to the latest government estimates, the December 2015 unemployment rate fell to 5.0% (Figure 5), marking the lowest level since June 2008. Over the year, the unemployment rate was down by 0.6%. For 2016, economists expect the labor market to continue to improve.

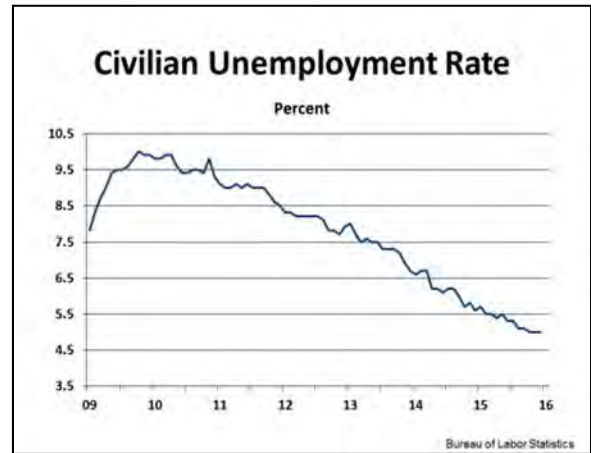


Figure 5 - Civilian Unemployment Rate

## U.S. Housing Market

The housing industry, a key barometer of the well-being of the economy, showed further improvement in 2015 as housing starts continued to increase. According to the U.S. Census Bureau, new-home construction retained a strong pace with a seasonally-adjusted annual rate of 1.17 million units in November (Figure 6). This is 10.5% above the revised October estimate of 1.06 million units and is 16.5% above the November 2014 rate. An estimated 1,032,500 housing units were started in 2015, up 11.0% from 2014.



Figure 6 - U.S. New Housing Starts

According to Freddie Mac's December 2015 *Insight & Outlook*, 2015 was the best year in home sales since 2007, while foreclosures and short sales continue to decline. The

2016 housing market is prepared for a strong start as the economic recovery appears to be gaining momentum. An improving labor market, income growth, low inflation, and lower oil prices should lend support to the housing market.

At 3.96%, the 30-year mortgage rate for December 2015 increased slightly from the previous month. In early 2016, mortgage rates were remaining stable with the most recent surveys indicating a preliminary January number of 3.94%.



Figure 7 - 30-Year Mortgage Rate

For 2016, Freddie Mac expects mortgage rates to inch higher in response to monetary tightening, averaging 4.4% for the year. Although rising modestly in 2016, mortgage rates will stay at historically low levels. Tighter monetary policy is not expected to generate an increase in longer-term rates in the near future.

Total housing starts are expected to increase by 16.0% in 2016. While monetary policy is eased in the rest of the world, higher interest rates in the U.S could increase private capital into U.S. Treasury markets. This should prevent a jump in long-term interest rates and put downward pressure on the U.S. dollar. If this occurs, inflation rates should stay below the Fed's target rate which would slow the pace of rate increases by the Fed. The outlook for the housing market will be

contingent on the performance of the overall economy. In addition, economists caution that changes in domestic policy, particularly by the Federal Reserve, can alter the outlook.

## Federal Reserve Board

According to a press release by the Federal Open Market Committee, gradual adjustments to monetary policy will allow economic activity to expand at a moderate pace and labor market indicators will continue to strengthen. Considerable improvements in labor market conditions occurred in 2015 and inflation should rise to 2.0% in the medium term. Given the economic outlook and the time required for policy actions to impact future economic outcomes, the target range for the federal funds rate was increased to 0.25% to 0.50% in December 2015.

The Committee will continue to assess economic conditions relative to its objectives of maximum employment and 2.0% inflation when making future adjustments to the federal funds rate. Since inflation is currently below the target level, the Committee will continue to monitor actual and expected progress toward its inflation goal. The Committee expects only gradual increases in the federal funds rate as economic conditions evolve. However, the actual path of the federal funds rate will depend on the economic outlook as informed by incoming data.



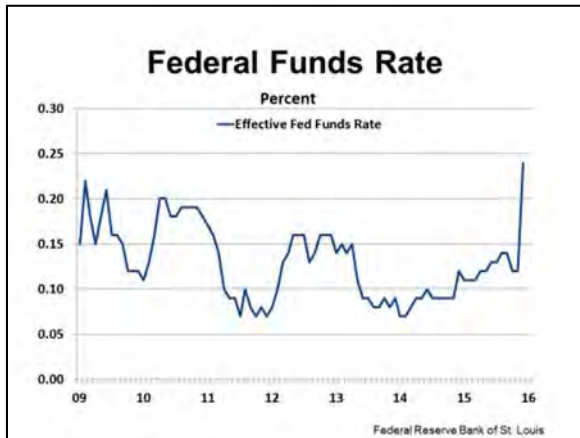


Figure 8 - Federal Funds Rate

A January 2016 *Wall Street Journal* survey indicates that the majority of respondents expect the next increase in the federal funds rate in March 2016.

### Federal Budget Situation

Projections by the Congressional Budget Office (CBO) indicate that federal outlays will continue to outpace revenues for the foreseeable future. In 2016, the federal budget deficit will increase, in relation to the size of the economy, for the first time since 2009. For fiscal year 2015, federal spending totaled \$3.7 trillion and revenue came in at \$3.2 trillion (Figure 9), resulting in a deficit of \$439 billion. Though still significant, the 2015 deficit is the smallest since fiscal 2008.

Revenues for fiscal year 2015, which are a new high, represent an increase of 7.5% from the 2014 value. Outlays in fiscal 2015 are up \$183 billion, or 5.2% from the previous year. For fiscal 2016, CBO projects that revenue will grow by 5.6% and outlays by 6.3%.

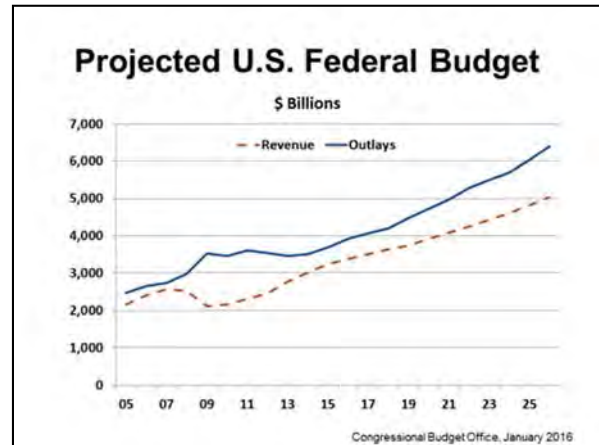


Figure 9 - Projected U.S. Federal Budget

For fiscal 2015, CBO estimates a deficit of \$439 billion (Figure 10). At 2.5% of GDP, the 2015 deficit will be much smaller than those of recent years (which reached almost 10.0% of GDP in 2009) and slightly below the average of federal deficits over the past 40 years.

Because outlays are projected to rise more rapidly than revenues in fiscal 2016, the deficit grows to \$544 billion. According to CBO's long-term projections, the annual deficit would remain less than 3.0% of GDP through 2018, but would grow thereafter, reaching 4.6% by 2025.

The persistent and growing deficits that CBO projects would result in increasing amounts of federal debt held by the public. In CBO's baseline projections, that debt rises from 74.0% of GDP this year to 84.0% of GDP in 2025. As recently as 2007, federal debt equaled 35.0% of GDP, but the very large deficits of the past several years caused debt to surge.

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).

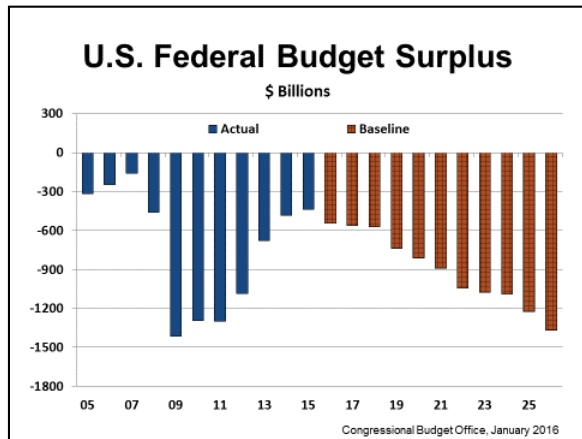


Figure 10 - U.S. Federal Budget Surplus

## 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 0.7% in 2015 after a 0.8% increase in 2014 (Figure 11). For 2015, the annual average CPI grew at only 0.1%, which is lower than the 2014 value and below historical averages.

In December, the indexes for energy and food both declined for the second month in a row. The energy index fell 2.4% as all major component energy indexes declined. The food index fell 0.2% as the index for food at home decreased 0.5%, led by a sharp decline in the index for meats, poultry, fish, and eggs.

The index for all items less food and energy rose 0.1% in December, its smallest increase since August. Indexes for shelter, medical care, household furnishings and operations,

motor vehicle insurance, education, used cars and trucks, and tobacco all increased in December. However, indexes for apparel, airline fares, personal care, new vehicles and communication declined.

Over the last 12 months, the all items index rose 0.7%. The food index rose 0.8% over the last 12 months, though the index for food at home declined. The energy index fell 12.6%, with all its major components decreasing. The index for all items less food and energy increased 2.1% over the last 12 months.

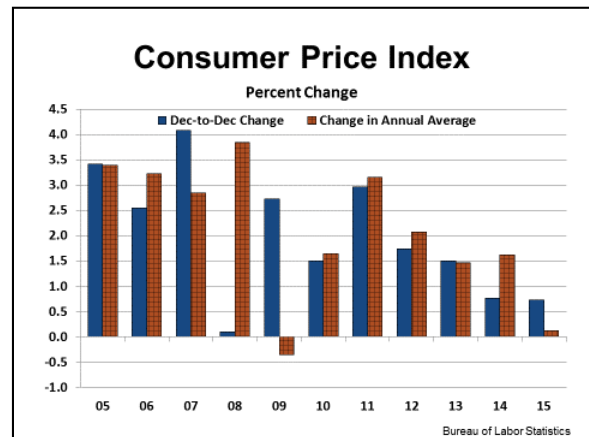


Figure 11 - Consumer Price Index

On a December-to-December basis, the PPI for finished goods declined in 2015 by 2.7% (Figure 12). Most of the decline is attributable to a decrease in gasoline prices.

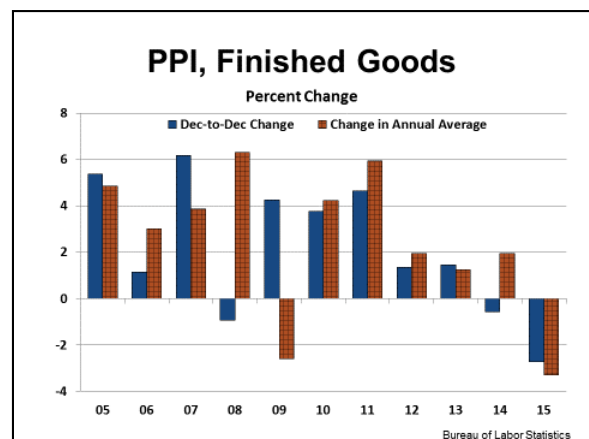


Figure 12 - Producer Price Index, Finished Goods



## Energy Prices and Supply

For 2016, 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 West Texas Intermediate market (WTI)) 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.

The Department of Energy's Energy Information Administration (EIA) estimates that global oil inventories increased by almost 1.9 million barrels per day (bbl/d) in 2015, which is the second consecutive year of additional inventory. Global inventories are expected to rise by another 0.7 million bbl/d in 2016, before the global oil market balances out in 2017. Production from countries outside of the Organization of the Petroleum Exporting Countries (OPEC) grew by 1.3 million bbl/d in 2015, with most of the growth in North America. In 2016, OPEC expects non-OPEC oil inventories to decline by 0.6 million bbl/d, which would be the first decline since 2008. Most of the decline would be in the United States. Total U.S. liquid fuel consumption is expected to decline by 0.4 million bbl/d in 2016.

EIA estimates that global consumption grew by 1.4 million bbl/d in 2015, averaging 93.8 million bbl/d for the year. EIA expects global consumption to grow by 1.4 million bbl/d in both 2016 and 2017.

The combination of robust world crude oil supply growth and weak global demand has contributed to rising global inventories and falling crude oil prices. EIA expects global oil inventories to continue to build in 2016, keeping downward pressure on oil prices.

The monthly average WTI crude oil spot price fell from an average of \$42/bbl in

November to \$37/bbl in December (Figure 13) and has continued to fall further in January 2016. The current price level represents the lowest level in 12 years. The average price for 2015 was \$49/bbl compared to a 2014 average of \$93/bbl. EIA now expects WTI crude oil prices to average \$38/bbl in 2016.

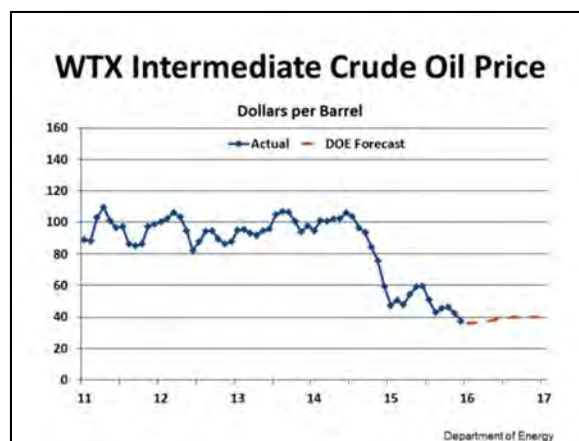


Figure 13 - WTX Intermediate Crude Oil Price

With global inventory expected to continue to increase in 2016, upward pressure on crude oil prices will be limited. The EIA outlook cautions that during the forecast period, oil prices could continue to experience periods of increased volatility. Going into 2016, the oil market faces many uncertainties, including the pace and volume at which Iranian oil reenters the market, the strength of oil consumption growth, and the responsiveness of non-OPEC production to low oil prices. The current values of futures and options contracts continue to suggest high uncertainty in the price outlook.

Retail diesel fuel prices (Figure 14), which track closely with crude oil prices, averaged \$2.31 per gallon in December 2015, down \$1.10 per gallon from year-earlier levels. The EIA projects diesel prices to average \$2.29 per gallon in 2016, with monthly lows projected in January and February.

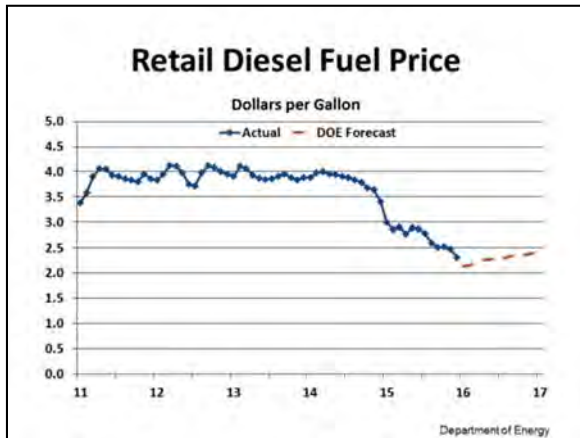


Figure 14 - Retail Diesel Fuel Price

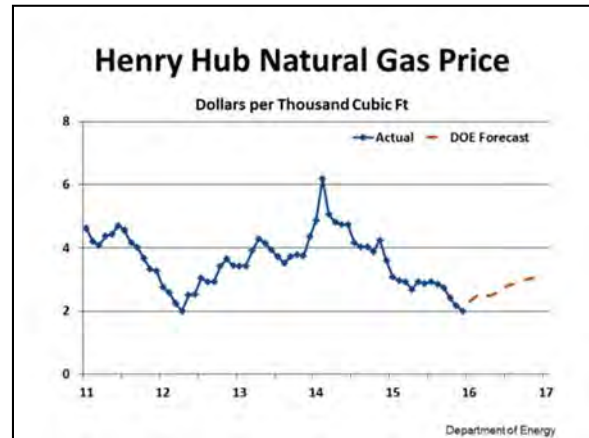


Figure 15 - Henry Hub Natural Gas Price

Natural gas prices dropped sharply at the end of 2015, due in part to a warmer-than-normal December, which along with robust production contributed to lower-than-average storage withdrawals. The Henry Hub natural gas spot price averaged \$1.99 per thousand cubic foot (Mcf) in December 2015 (Figure 15), down 17 cents from November and \$1.60 less than one year ago.

The current forecast for natural gas prices calls for increasing prices throughout 2016. Price increases reflect consumption growth, mainly from the industrial sector, that outpaces production growth in 2016. Production growth is projected to be flat in 2016 in response to lower prices and reduced rig activity. EIA projects that U.S. total natural gas consumption will increase to an average of 76.6 Bcf/d in 2016, compared with an estimated 73.8 Bcf/d in 2015. EIA expects that growth in marketed natural gas production will continue through 2016, but at a slower rate than in 2016.

### U.S. Equity Markets

After closing 2014 at 17,823, the Dow Jones Industrials Average (Dow) dropped 2.2% to 17,425 by the end of 2015 (Figure 16). This represents the first year-end drop since 2008. In January 2016, the Dow had the worst two-week start in history due to increased concerns about the global economy. In particular, China's financial and economic situation as well as the further decline in oil prices is creating significant concerns among investors.

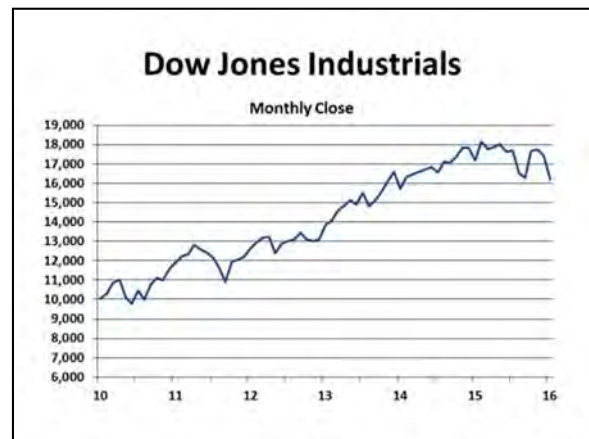


Figure 16 - Dow Jones Industrials

### World Economies

Global economic activity remained relatively stagnant in 2015. The world economy continued its recovery in 2015 but at a slower pace than 2013 and 2014. According to the latest projections by the International Monetary Fund, the world

economy grew by 3.1% in 2015, as compared to 3.4% in 2014 (Figure 17). Activity is expected to improve modestly in 2016 and 2017, primarily due to recovery in advanced economies. IMF projections call for the world economy to grow by 3.4% in 2016, and growth is expected to rise to 3.6% in 2017.

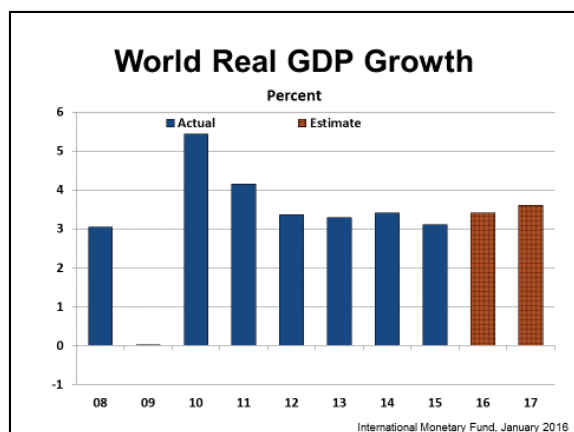


Figure 17 - World Real GDP Growth

The latest projections reflect a more gradual pickup in global activity relative to IMF’s October 2015 outlook, particularly in emerging markets and developing economies. The revisions reflect a reassessment of prospects in China, lower commodity prices, weaker activity in some major oil exporting countries due to the further drop in oil prices, as well as economic challenges in Brazil and Russia.

The IMF projects that output of emerging and developing economies will expand at 4.3% in 2016 and 4.7% in 2017. In advanced economies, growth is projected at 2.1% in both 2016 and 2017.

Looking across key countries and regions, the economy in the Euro Area is projected to grow by 1.7% in 2016 and 2017 (Table 2). Stronger private consumption supported by lower oil prices and easy financial conditions is outweighing a weakening in net exports.

In Japan, growth is expected to firm in 2016, backed by fiscal support, lower oil prices, favorable financial conditions, and rising incomes.

According to the IMF report, growth in China is expected to slow to 6.3% in 2016 and 6.0% in 2017, due to weaker investment growth as the economy continues to rebalance. While India and the rest of emerging Asia are projected to continue growing at a relatively strong pace, some countries will experience headwinds from China’s economic rebalancing and global manufacturing weakness.

Higher growth is projected for the Middle East, but lower oil prices and geopolitical tensions continue to weigh on the outlook. The recession is expected to continue into 2016 for Russia as the country continues to adjust to low oil prices and Western sanctions.

Table 2 - Selected Economies: Real GDP

	Year-Over-Year % Changes			
	2014	2015e	2016f	2017f
World	3.4	3.1	3.4	3.6
U.S.	2.4	2.5	2.6	2.6
Euro Area	0.9	1.5	1.7	1.7
Japan	0.0	0.6	1.0	0.3
China	7.4	6.8	6.3	6.0
India	7.3	7.3	7.5	7.5
Russia	0.6	-3.7	-1.0	1.0
Brazil	0.1	-3.8	-3.5	0.0
Mexico	2.3	2.5	2.6	2.9

Source: International Monetary Fund, January 2016

## Exchange Rates

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

In 2015, the euro averaged 0.90 per dollar, which is higher than the average value of 0.75 in 2013 and 2014 (Table 3). At the close of 2015, the euro stood at 0.92 per dollar.

Likewise, the Japanese yen further depreciated in 2015. After sliding more than 35.0% since the end of 2011, economists surveyed by Bloomberg have a mixed view for 2016, with some calling for a rally toward 100-110 yen per dollar while others forecast a further slide to 125 per dollar.

The Brazilian real also depreciated against the dollar and is expected to fall further in 2016. In the view of some analysts, the sharp devaluation of the Brazilian real is due to the current economic situation and the immobility of the government as well as concerns that their economy may fall further into recession in 2016. The real declined more than 30.0% against the dollar in 2015 and fell to 4.07 per dollar in late January 2016.

While most Asian currencies showed a slight depreciation against the dollar in 2015, the Indonesia Rupiah had a large decline in 2015.

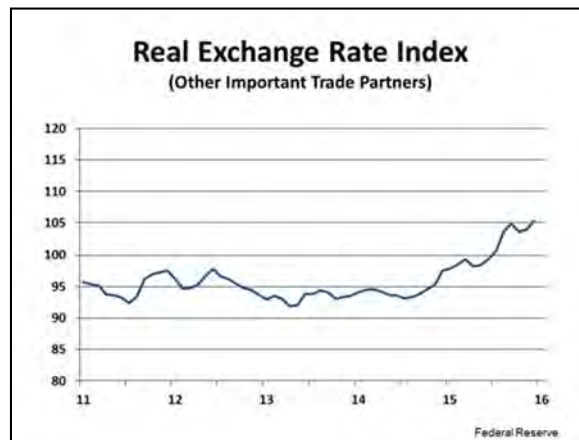
**Table 3 - Selected Exchange Rates**

	Currency per U.S. Dollar		
	2013	2014	2015
Euro	0.75	0.75	0.90
Japanese Yen	97.55	105.82	121.04
Brazilian Real	2.15	2.35	3.33
South Korean Won	1,090	1,051	1,130
Indian Rupee	58.42	60.90	64.02
Indonesia Rupiah	10,391	11,836	13,344
Pakistani Rupee	100.69	100.21	101.90
Chinese Yuan	6.19	6.14	6.22

Source: Oanda.com

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 in both 2014 and 2015. For December, the index was at the highest level since 2009.



**Figure 18 - Real Exchange Rate Index**

## Commodity Prices

The U.S. Department of Agriculture (USDA) publishes monthly indices of prices received by farmers. During 2015, the crop price index increased through May only to experience a decline in the latter half of the year. The December index of 82 represented a 9.0% decline from the May high (Figure 19).

Relative to year-ago levels, crop price declines are the most evident in the feed grain and oilseed sectors. Larger crops in 2015 and a slow-down in the use of grains for renewable fuels have contributed to the weaker prices. Price indices from fruits and vegetables are above year-ago levels.

Cotton prices exhibited a similar movement to the grain and oilseed sectors. After steadily increasing through July, the cotton price index had fallen by 14.7% by December. Lower prices reflected expectations of smaller imports by China and sluggish world demand.

Unlike the sharp increase in 2014, livestock prices trended downward in 2015 and ended

the year with a 20.0% drop. Compared with a year ago, the price for eggs and turkeys is higher, but prices are down for cattle, calves, hogs, broilers, and milk.

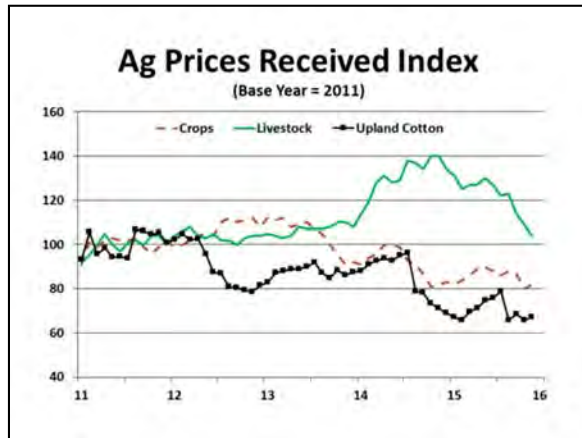


Figure 19 - Ag Prices Received Index

USDA also publishes monthly indices of prices paid by farmers for various production inputs. Of particular interest are the indices for energy related inputs such as diesel and nitrogen fertilizer. In line with the previous discussion on retail diesel prices, the diesel prices paid index declined rather sharply in 2015 (Figure 20). The diesel price index ended the year down 19.0% from the beginning of 2015. By December, the diesel price index approached levels not seen since early 2009.

The nitrogen price declined steadily throughout 2015 and ended the year 8.0% lower than at the beginning of the year.

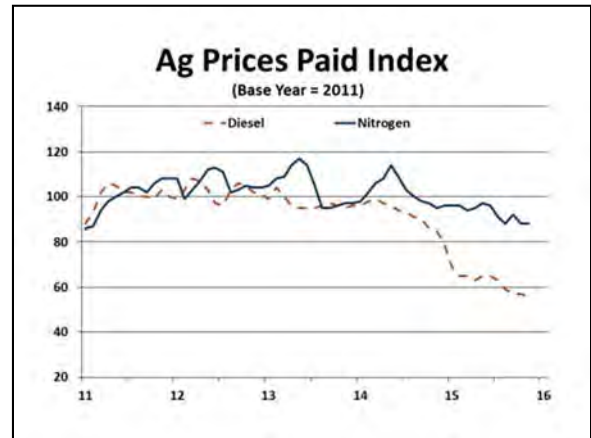


Figure 20 - Ag Prices Paid Index

### U.S. Net Farm Income

The latest USDA estimates place U.S. net farm income at \$55.9 billion in 2015, down 38.0% from 2014's estimate of \$90.4 billion (Figure 21). The decline in net farm income would be the largest single-year decline since 1983. Net cash income is forecast to decline by 27.7% in 2015.

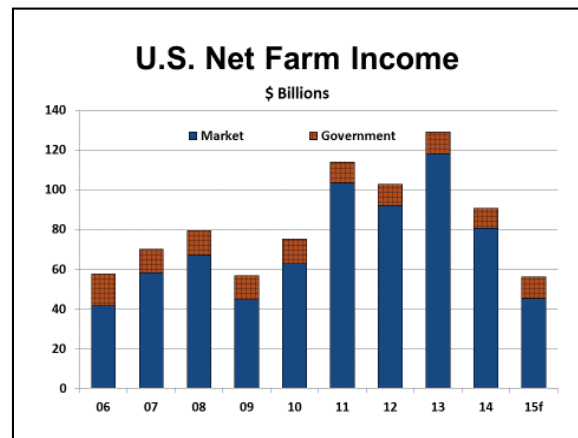


Figure 21 - U.S. Net Farm Income

According to USDA's Economic Research Service, crop receipts are expected to decrease by 8.7% in 2015, led by a forecast \$8.6-billion decline in corn receipts, a \$5.7-billion drop in soybean receipts, and a \$2.7-billion drop in wheat receipts. Livestock receipts could fall by 12.0% in 2015, a reversal from the 43.8% increase in receipts over the 2005-14 period. Government payments are projected to rise 10.4% to \$10.8 billion in 2015.

Total production expenses are forecast to fall 2.3%, the first time since 2009 to show a year-over-year decline. Energy inputs and feed are expected to have the largest declines. Expenses are forecast to increase for labor, interest, and property taxes.

After several years of steady improvement, farm financial risk indicators such as the debt-to-asset ratio are expected to rise in 2015, indicating increasing financial

pressure on the sector. However, debt-to-asset and debt-to-equity ratios remain low relative to historical levels.

Declining farm sector assets resulting from a modest decline in the value of farmland, investments, and other financial assets—as well as higher debt—are forecast to reduce equity by 4.8%, the first decline since 2009.



## U.S. Farm and Trade Policy

Agricultural policy provisions applying to the 2016 crop are authorized by the Agricultural Act of 2014, also known as the 2014 Farm Bill.

### **The Agricultural Act of 2014**

The Agricultural Act of 2014 included considerable changes to the structure of upland cotton support. The new policies were implemented throughout the 2015 crop year and will continue for 2016. A few key changes and additions are discussed below.

#### ***Generic Base***

The 2014 Farm Bill converts upland cotton base to generic base. For each farm, the number of cotton base acres credited to the farm on September 30, 2013 will be the number of generic acres established for 2014 and beyond.

Generic base acres planted to a covered commodity are eligible for Agriculture Risk Coverage and Price Loss Coverage (ARC/PLC) payments in that year and will be attributed to a covered commodity as determined by formulas detailed in the legislation.

#### ***Base Loan Rates, Marketing Loans and LDP's***

The marketing assistance loan for upland cotton is maintained in the 2014 Farm Bill with the determination of the level of the base loan rate modified in order to address the findings of the WTO panel. 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 loan rate is equal to the 2-year average AWP for the 2 most recently completed marketing years as of October 1 in the fall prior to planting. For example, the 2016 loan

rate is based on the 2013 and 2014 marketing years since those are the 2 most recent years as of October 1, 2015. However, the loan rate cannot exceed its 2008 Farm Bill level of 52 cents per pound nor be less than 45 cents per pound. For 2016, the base loan rate remains at 52 cents.

Marketing loan repayment provisions and the determination of the premium and discount schedules remain unchanged from the 2008 farm law. Storage credits are maintained with the rate set at 90.0% of the 2006 rate.

The loan rate for ELS cotton is set at 79.77 cents per pound.

#### ***Payment Limitations and Eligibility Requirements***

The 2014 Farm Bill contains significant changes in payment limitations and eligibility requirements. An income means test is established based on total adjusted gross income (AGI) of \$900,000 for commodity and conservation benefits. A payment limit of \$125,000 per entity is established for payments received under Title I price and revenue programs and marketing loan benefits, both marketing loan gains (MLGs) and loan deficiency payments (LDPs). The LDP/MLG is a significant departure from the 2008 farm law, which imposed no limit on marketing loan benefits. The current legislation maintains the separate limit for peanuts.

The use of commodity marketing certificates has now been reinstated for 2015 and subsequent crops. Section 740 of the Consolidated Appropriations Act of 2016, signed into law on December 18, 2015, amended the 1996 farm law to include provisions for the issuance of commodity certificates. 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***

In terms of eligibility for Title I price and revenue programs, the farm bill authorized fundamental changes in the rules that determine whether an individual is considered to be actively engaged in farming. Under the 2008 farm law, actively engaged in farming required a contribution of management and/or labor. The current legislation authorized the Secretary of Agriculture to define what constitutes a significant contribution of management for the purpose of being considered actively engaged and provides discretionary authority to establish a limit on the number of individuals who may be considered actively engaged when a significant contribution of management is used to meet the actively engaged requirements.

On December 15, 2015, USDA changed the "actively engaged in farming" requirements for certain farm program eligibility provisions. These changes are applicable to the 2016 and subsequent crop years. The changes apply only to farming operations conducted by general partnerships and joint ventures that encompass non-family members, and payment eligibility for 2016 and subsequent crop years for Agriculture Risk Coverage (ARC) and Price Loss Coverage (PLC) Programs, loan deficiency payments (LDP) and marketing loan gains (MLG) realized via the Marketing Assistance Loan Program.

The new provisions do not apply to persons or entities comprised entirely of lineal family members or nonfamily farming operations seeking to have no more than one person (referred to as Farm Manager)

qualifying as actively engaged by providing a significant contribution of active personal management or a combination of management/labor. Lineal family includes great grandparents, grandparents, parents, children (including legally adopted and stepchildren), grandchildren, great grandchildren or spouses of siblings of family members. If an operation qualifies as family in one year and becomes non-lineal in a subsequent year, no grandfathering of the family designation will apply. The rule does not change existing regulations regarding contributions of land, capital and equipment, or labor or landowner or spouse exemptions.

The rule applies to eligibility of payments for the 2016 crop year for farming operations with only spring planted crops and for 2017 and subsequent crops years for all farming operations (either spring or fall planted crops). The existing requirement that farming operations provide FSA with each member's contribution or expected contribution of labor or management is unchanged. However, all members of farming operations subject to the final rule contributing active management or a combination of management/labor will also be required to keep and provide a management log. Operations seeking to qualify two or three farm managers providing active management or management/labor must maintain and provide records or logs of specific contributions. Operations must be deemed large for two qualified farm managers to be actively engaged. Operations must be deemed large and complex for three qualified farm managers to be actively engaged. Significant management is an annual contribution of 500 hours or at least 25% of total management required for the operation plus specific critical management activities. The annual significant labor requirement is 1000 hours. Passive management activities do not qualify.

Significant contribution of management may be used to qualify one person or legal entity in a farming operation as to meeting the requirements of actively engaged.

### ***Stacked Income Protection Plan***

Beginning in 2015, the Stacked Income Protection Plan (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.

The "stacked" feature implies that the coverage would sit on top of the producer's individual crop insurance product. While designed to complement an individual's buy-up coverage, a producer is not required to purchase an individual buy-up policy in order to be eligible to purchase a STAX policy.

STAX carries a premium subsidy of 80% and covers losses in expected revenue between 10% and 30%. In other words, the maximum coverage range is 70% to 90% of expected revenue. However, the coverage range is adjustable in 5% increments so a producer may customize the policy to best address their risk. Producers have the choice of customizing STAX based on the harvest price option and a protection factor that can scale indemnities up or down by 20%. STAX policies are available by irrigated and non-irrigated practices to the greatest extent possible.

In 2016, RMA included several enhancements to the STAX program. Producers now have the option to further differentiate STAX purchase decisions by production practice by electing a 0% coverage range. In 2015, the lowest coverage level was 70-75%. Having the upper and lower coverage levels the same would technically mean that all acres are insured, but there would be no indemnity associated with the 70-70% policy. Since all of the growers acres are insured, then growers must report their production from all acres, thus enhancing the accuracy of the county estimate.

Another enhancement is the availability of STAX coverage in written agreement (WA) counties. There are 17 counties in which cotton underlying insurance policies are offered by WA. STAX was not available in those counties for the 2015 crop year but is now available for 2016. In addition to these changes, producers can also purchase STAX for cottonseed through an optional endorsement in 2016.

As with other insurance products, STAX is not subject to payment limitations or means tests. County-specific details are available both on the NCC website [www.cotton.org](http://www.cotton.org) and the USDA-RMA website [www.rma.usda.gov](http://www.rma.usda.gov).

### ***Other Crop Insurance Changes***

For upland cotton acres not purchasing a STAX policy, producers may purchase an alternative product known as a Supplemental Coverage Option (SCO). Unlike STAX, an underlying policy is required in order to purchase SCO. Essentially, SCO provides coverage for a portion of the individual's deductible from the underlying policy. SCO indemnities are triggered on county experience and the SCO policy will be either a yield or revenue policy, depending on the underlying coverage. The SCO deductible is 14%, as

opposed to 10% in STAX, and the SCO premium subsidy is 65%.

The current farm law makes permanent the option of insuring enterprise units and adds the option to insure enterprise units by practice. Producers will also have the option to make adjustments to their approved yield history and insure acres under different production practices at different coverage levels. In some regions of the Cotton Belt, the provision to adjust their approved yield will have significant benefits. Producers are encouraged to consult closely with their insurance agents to determine the best risk management options for their farming operation.

### ***Cotton Import Provisions***

The 2014 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.

### ***Economic Assistance to Users of Upland Cotton***

The highly successful assistance for U.S. textile mills continues in the 2014 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**

Contentious trade issues involving cotton continued in 2015. The Turkish government's self-initiated antidumping (AD) investigation of U.S. cotton remains unresolved. The year ended with the WTO Ministerial Conference in Nairobi, Kenya.

### ***Turkey Antidumping Investigation***

Turkey's antidumping (AD) investigation of imports of U.S. cotton continued throughout 2015. The investigation was self-initiated by Turkey's Ministry of Economy (MoE) in October 2014. Dumping of a product is defined as selling the product into a market at a price that is less than the product is sold into the exporting country's domestic market or being sold to another importing country. Dumping can also be determined if a product is sold at a price less than the costs of production. In order to conclude an investigation in the affirmative, there must first be a finding of dumping; then it must be concluded that there is economic injury in the domestic market; and finally conclude that the dumping caused the injury. If all 3 conditions are met, the investigating country may apply a duty on the imported product.

The investigation is cause for serious concern to the U.S. cotton industry. First, Turkey is the second largest market for U.S. cotton, importing as much as 2 million bales in some years. Second, the investigation has all appearances of being politically motivated and launched in retaliation for the United States conducting AD and countervailing duty (CVD) investigations of imports of Turkish steel products. Third, the early stages of the investigation lacked transparency. Turkish officials were not forthcoming with data that supposedly

validates their initiation of the investigation. In addition, while self-initiation of an investigation is allowed under WTO rules, a country is required to demonstrate the 'special circumstances' prompting the self-initiation. Turkish officials failed to provide those circumstances.

U.S. merchandising firms received detailed questionnaires from Turkish authorities requesting data on all transactions to Turkey and other markets. U.S. companies complied with the request by the December 2014 deadline. The National Cotton Council was accepted as an interested party to the investigation and submitted preliminary written arguments in January 2015. The NCC, as well as several merchandising firms, retained counsel in Turkey to assist in defending the U.S. industry against this baseless investigation.

In April 2015, U.S. merchandising firms received a second questionnaire from the MoE requesting additional information on sales and costs of production. After receiving an extension until June, merchandisers complied with the MoE's request by providing the data at their disposal.

The NCC, working with ACSA and AMCOT, remained active as an interested party by submitting arguments against the use of producer costs of production data. In addition, the NCC submitted a second injury document in August.

In October, NCC staff met with Turkey's Deputy Director General of Imports and other MoE technical staff to discuss the investigation. Turkish counsel representing NCC and ACSA also attended. Prior to the session with MoE staff, the group met with US Embassy staff and also held several meetings with textile businesses. During the trip, NCC was informed that the investigation had been formally extended six

months, which would therefore conclude sometime in March.

Turkish officials furthered the investigation by conducting site visits with four firms in November. Since those visits, it is presumed that MoE staff continue to evaluate the submitted data.

A preliminary report could be issued at any time. NCC staff are prepared to travel to Turkey to participate in an oral hearing, if necessary, and will submit comments to rebut or support the report, depending on the recommendation on duties. If a report is not issued before the extension runs out, the Ministry would have to reinstate the investigation.

Even in the absence of duties, the uncertainty caused by the investigation is having a detrimental effect on sales of U.S. cotton to Turkey. Any application of a duty would put U.S. cotton at a disadvantage to competing growths, thus jeopardizing the second largest market.

### ***WTO Trade Talks***

WTO members concluded their 10<sup>th</sup> Ministerial Conference in Nairobi, Kenya on December 19, 2015. The Nairobi Package contains a series of six Ministerial Decisions on agriculture, cotton and issues related to least-developed countries.

To continue to highlight the shortcomings in WTO notifications by major producing countries, the decision was made to continue the cotton dedicated discussions within the WTO for purposes of providing greater transparency and complete notifications of subsidies by all countries.

The Nairobi ministerial declaration also reaffirms that developed countries shall provide duty free/quota free access for cotton and cotton-related products to least developed countries (LDCs). The United

States already has provided this access for LDCs.

Across agriculture, the declaration calls for the immediate elimination of agricultural export subsidies by developed countries and within three years by developing countries. There are limited exceptions until 2023 for transportation and marketing subsidies by developing countries, subject to conditions. The agreement also will align the use of export credits by all countries to the same terms as those currently utilized by the United States, creating a more level playing field.

During the negotiations, U.S. negotiators held firm with respect to any cotton specific outcomes regarding domestic support, thus ensuring that the U.S. would not face any new restrictions on cotton domestic support.

### **Textile Trade Issues**

Textile trade policy continues to have a substantial impact on the U.S. textile industry, both in terms of opportunities to export textiles and the pressures brought to bear by imported textiles and apparel. During 2015, negotiations for the Transatlantic Trade and Investment Partnership (TTIP) continued while negotiations for the Trans-Pacific Partnership (TPP) concluded. In mid-2015, Trade Promotion Authority (TPA) and the Trade Preference Extension Act were passed by Congress and signed by the President.

### ***Trade Preference Extension Act and Trade Promotion Authority***

In June 2015, Congress passed and the President signed into law two bills related to trade. The bills were the Trade Preference Extension Act and Trade Promotion Authority.

The Trade Preference Extension Act includes Trade Adjustment Assistance

(TAA), extension of the African Growth and Opportunity Act (AGOA), extension of trade preferences for Haiti and extension of the Generalized System of Preferences. TAA provides job training, income support, and other employment-related benefits to American workers who have lost or may lose their jobs as a result of foreign trade.

The TPA allows free trade agreements negotiated in compliance with the legislation's provisions to be presented to Congress for approval by an up-or-down vote without amendments. It is generally accepted that TPA is essential to gain approval of both the TPP and TTIP free trade agreements.

### ***Trans-Pacific Partnership***

Negotiations on the TPP agreement concluded in October 2015 among the negotiating partners of Australia, Brunei Darussalam, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore, the United States, and Vietnam.

Trade Promotion Authority establishes the timelines for the Administration to notify Congress of the intent to sign the agreement 90 days before signing and the text of the agreement must be made available 60 days before entering into the agreement. The text of the agreement was made public on November 5, 2015, the same day President Obama notified Congress of his intent to enter into the TPP. The leaders of the 12 TPP nations are expected to sign the agreement in early February and then send it to their legislatures for approval. Congress has not specified when they will bring up TPP for a vote, but there has been some indication that it may not occur until the lame duck session of Congress following this year's elections.

With respect to cotton fiber imports into the United States, the agreement provides for elimination of import duties within 10 years.

Almost all duties and quotas applicable to United States cotton fiber exports to TPP countries appear to be eliminated immediately. The only exception is the duty on United States exports to Vietnam of cotton yarn waste, including yarn waste and garneted stock. The current duty of 10% is scheduled to be eliminated within four years.

The U.S. cotton industry has long held the concern that a TPP agreement that includes Vietnam is not positive for the U.S. textile industry. Much of the concern stems from granting additional access to the U.S. textile market to a centrally-planned economy that has textile companies that have a history of contract defaults. With those overarching concerns in mind, U.S. negotiators appear to have taken steps to mitigate the negative impacts. The National Council of Textile Organizations (NCTO) recently endorsed the agreement after it was determined that the text meets most of the U.S. textile industry's objectives.

According to the NCTO, those objectives include: a strong yarn forward rule of origin for the vast majority of textile and apparel products; reasonable, multi-year tariff phase-outs for sensitive textile and apparel products; and terms that provide for the stability of the Western Hemisphere textile and apparel production chain.

The agreement contains an earned import allowance program for Vietnam which allows them to import a certain quantity of cotton trousers made from non-TPP fabric into the United States duty free. The amount of the credit earned per square meter equivalent of U.S. fabric varies for men's and boys' trousers versus women's and girls' trousers. Furthermore, the agreement provides a cap on the amount of men's and boys' cotton trousers that can be imported into the U.S. each year under this program. The cap is 15 million square meter

equivalents in year one and increases each year until year ten when it reaches 20 million square meter equivalents. The cap will remain at 20 million square meter equivalents in all subsequent years. The agreement also immediately eliminates duties on certain woven cotton dress shirts imported to the U.S. from Vietnam and Malaysia. U.S. imports of these woven cotton dress shirts from other participating TPP countries will be reduced by 50% of the base rate upon entry into force of the agreement and will become duty-free on January 1 of year 13 of the agreement.

All textile and apparel tariff lines, including cotton products, will eventually be eliminated under a basket arrangement based on perceived sensitivity level. Domestic production and imports from Western Hemisphere trading partners utilizing U.S. textile inputs factored heavily into the sensitivity formula. While all lines will undergo some duty reduction at entry into force, products most sensitive for the Western Hemisphere supply chain (e.g. cotton t-shirts and socks) are largely included in the 10 or 12 year extended phase-out baskets.

The agreement also contains strong customs enforcement provisions that are beneficial to the cotton and cotton products sectors. Strong customs enforcement is important in order to ensure the provisions of the agreement are adhered to.

### ***Transatlantic Trade and Investment Partnership***

Negotiating teams for the United States and the European Union (EU) conducted four rounds of negotiations on TTIP in 2015. In December 2015, U.S. Trade Representative Michael Froman and European Commissioner for Trade Cecilia Malmstrom said in a joint statement the European Union and the United States have made considerable progress towards a TTIP

agreement in 2015, notably since the G7 Elmau summit in June, when it was agreed to accelerate work on all elements of the agreement. Both said they are committed to expeditiously reaching an ambitious, comprehensive agreement and agreed to further intensify their work during 2016 to help negotiations move forward rapidly, including through enhanced intersessional work, frequent formal negotiating rounds, and increased Minister level consultations.

### **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 37 countries that are eligible for economic and trade benefits under AGOA. Of those 37 Sub-Saharan countries, 26 of them are eligible to receive AGOA's apparel benefits. Twenty-eight countries also qualify for the LDC special rule for apparel (third-country fabric). Nineteen countries also qualify for AGOA's provisions for hand-loomed and handmade articles. Seven countries qualify for AGOA's ethnic printed fabric benefits.

A historical review of various trade agreements affecting textiles can be found at [www.cotton.org](http://www.cotton.org).



## U.S. Supply

### Planted Acreage

U.S. farmers planted 8.4 million acres of upland cotton in 2015, a decrease of 22.3% from the previous year (Figure 22).

Decreases were observed in all production regions. From Texas to the east, the decreased acres were primarily the result of stronger corn, soybeans, and sorghum prices relative to cotton. Increased competition from peanuts was also a factor in the Mid-South and Southeast. In the West, competition from specialty crops and reduced water allocations for irrigation limited upland cotton area.

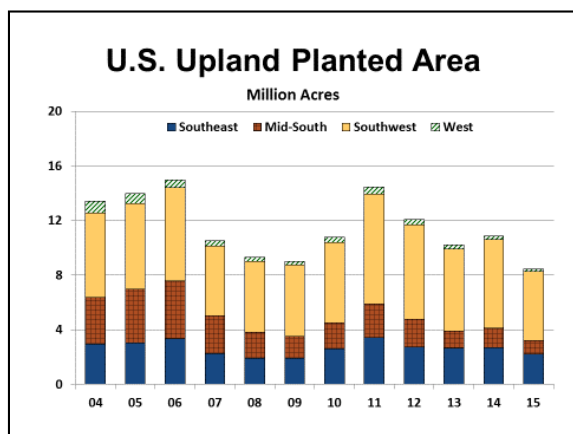


Figure 22 - U.S. Upland Planted Area

In the Southeast, the decrease in 2015 cotton area was 434 thousand acres, or 16.3%. (Figure 23). With total area just above 2.2 million acres, 2015 plantings in the Southeast fell to the lowest level since 2009. Alabama and Florida decreased cotton acreage by 10.0% and 20.6%, respectively. The acreage reductions were consistent across Georgia (-18.1%), North Carolina (-17.2%), and South Carolina (-16.1%). The decrease in cotton area in those three states reflected a shift from cotton to peanuts, corn, and soybeans.

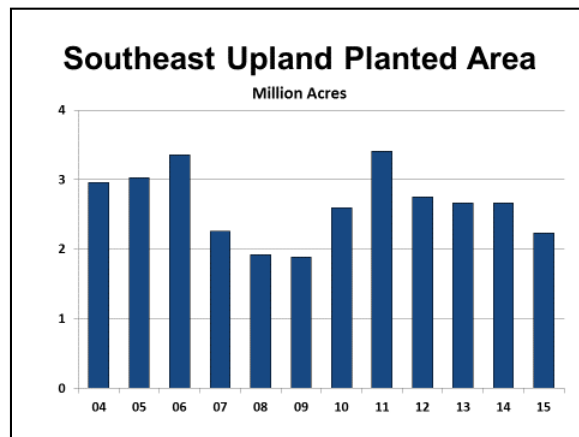


Figure 23 - Southeast Upland Planted Area

In 2015, plantings of 985 thousand acres in the Mid-South represented a 32.3% decrease (Figure 24) from the previous year, which is a record low. In recent years, Mid-South farmers have demonstrated their ability and willingness to adjust their crop mix based on market signals. The decline in 2015 continued that pattern as growers moved away from cotton and mostly into corn and soybeans. All five states lowered cotton acreage in 2015. For Arkansas, Louisiana, Mississippi, Missouri, and Tennessee, acreage declined by 37.3%, 32.4%, 24.7%, 26.0% and 43.6%, respectively. State totals for the region are: Arkansas – 210 thousand acres, Louisiana – 115 thousand acres, Mississippi – 320 thousand acres, Missouri – 185 thousand acres, and Tennessee – 155 thousand acres.

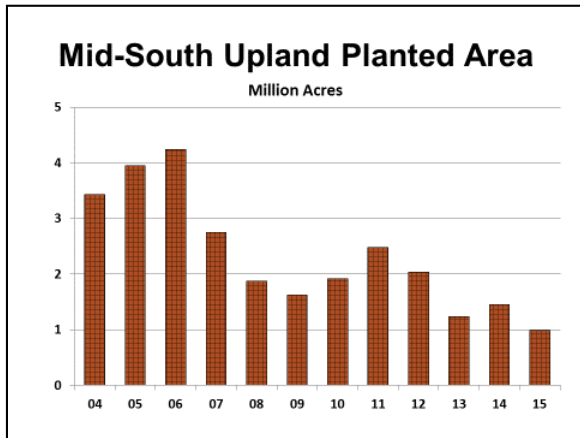


Figure 24 - Mid-South Upland Planted Area

In the Southwest, upland cotton area declined by 22.3% to 5.0 million acres (Figure 25). Lower cotton prices relative to wheat and sorghum contributed to the decrease in each of the three states in the region. With a 10.4% decrease, Oklahoma's cotton area was reduced from 240 thousand acres to 215 thousand acres. Kansas area dropped 48.4%, bringing the 2015 total to 16 thousand acres. In Texas, producers planted 4.8 million acres, a 22.6% decrease from 2014. The decline in Texas was also due in part to extremely wet conditions in the southern regions of the state limiting plantings.

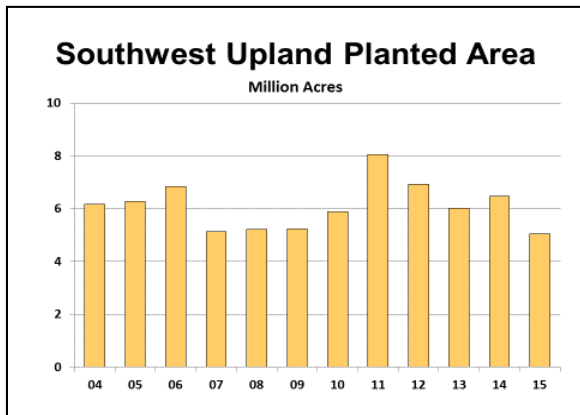


Figure 25 - Southwest Upland Planted Area

Upland acres in the West stood at 171 thousand acres, down 31.6% from 2014 (Figure 26) and a record low. The decline in the regional total was driven by reduced acres in Arizona and California. In

percentage terms, Arizona's 40.7% decline outpaced the 17.5% drop in California and the 18.6% decline in New Mexico. Declines in California reflected cotton's continuing struggle to compete with a variety of specialty crops, as well as severe limitations in irrigation water for 2015.

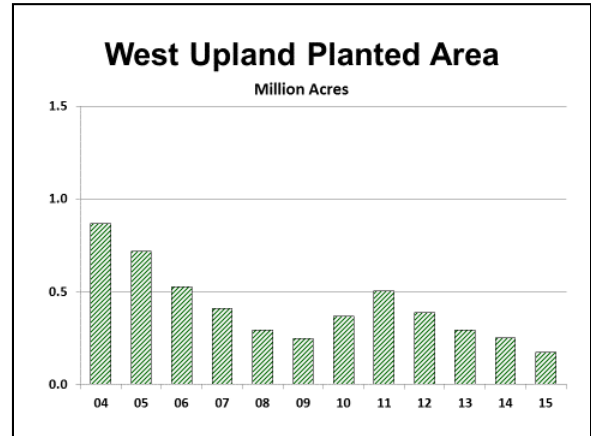


Figure 26 - West Upland Planted Area

In 2015, growers also reduced the area devoted to ELS cotton. For the U.S. as a whole, ELS acres fell 17.6%, leaving planted area at 159 thousand acres, the lowest level since 2009 (Figure 27). The decline in U.S. acreage was the result of California producers planting 24.5% fewer acres. Arizona and New Mexico increased area by 16.7% and 29.6%, respectively. Texas ELS acreage was unchanged from 2014.

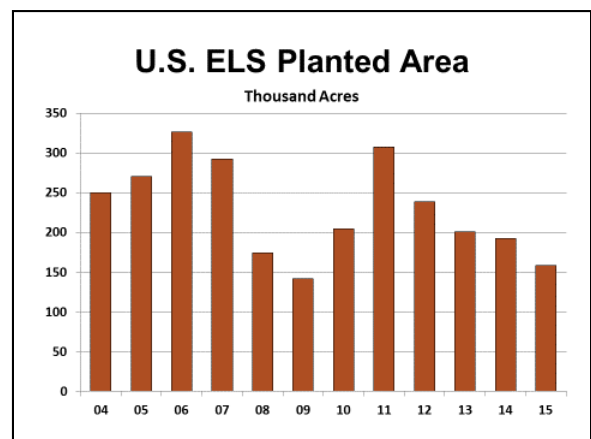


Figure 27 - U.S. ELS Planted Area

## Harvested Acreage

Although weather issues continued to plague portions of the Cotton Belt in 2015, overall abandonment was much less than the previous 4 years. National abandonment stood at 5.9%, which compares to a 5-year average of 21.9% (Figure 28). However, quality issues were more prevalent across portions of the Cotton Belt in 2015.

Despite drought conditions still prevalent in parts of the Southwest, abandonment rates in Texas and Oklahoma fell to their lowest levels since 2010. On a state-wide basis, growers in Texas harvested 93.8% of their upland cotton acres, much improved from the 2011-14 average of 44.0%. In Oklahoma, only 4.7% of acres were unharvested, which is comparable to levels observed in 2009 and 2010. In South Carolina, abandonment was a high of 47.2% due to extreme flooding. North Carolina, Missouri, and Tennessee abandonment rates were higher than their respective 5-year averages. In other states, the 2015 abandonment was generally in line or improved from 5-year averages.

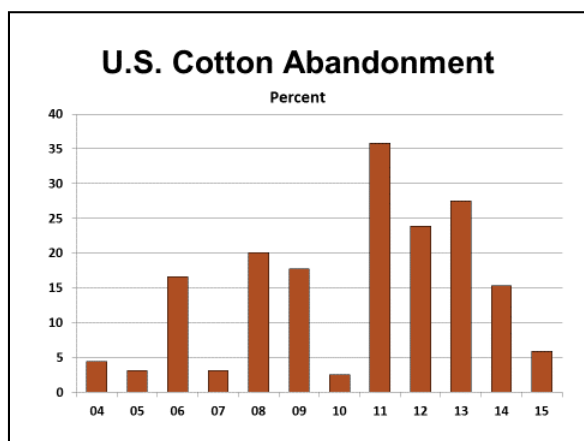


Figure 28 - U.S. Cotton Abandonment

## Yields

Despite an overall improvement in soil moisture conditions in 2015, the national average cotton yield of 769 pounds is the lowest level since 2003. Looking at the numbers in more detail provides a better

insight to the varying conditions faced by growers across the Cotton Belt. Georgia, Tennessee, Kansas, and Oklahoma were the only states with higher yields in 2015 compared to the previous year. However, for 10 of the 17 states, the 2015 yield was still higher than the 5-year average.

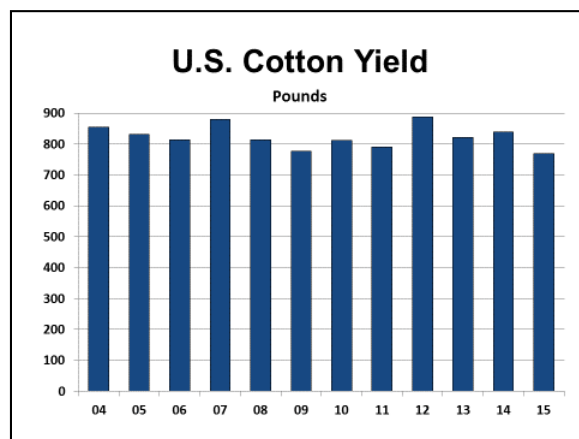


Figure 29 - U.S. Cotton Yield

While some areas of the 6-state Southeast region faced favorable growing conditions in 2015, others experienced devastating flooding and excessive moisture near harvest time. For the region as a whole, the 2015 yield of 876 pounds was 17 pounds better than the 5-year average (Figure 30).

Georgia, with an average yield of 986 pounds recorded the highest yield of the six states. The Georgia yield is the second highest yield for the state, falling below the 2012 level. At the other end of the spectrum was South Carolina, with an average yield of 581 pounds, which is the lowest yield since 2007. At 686 pounds, the 2015 North Carolina yield was 18.0% below the 5-year average. At 857 and 843 pounds, respectively, Florida and Alabama produced yields above the 5-year averages. Virginia's yield of 823 pounds followed closely on the heels of Florida and Alabama.

<b>Southeast Upland Yields</b> Pounds per Harvested Acre			
	2014	2015	5-Year Average
Alabama	901	843	811
Florida	878	857	784
Georgia	900	986	883
North Carolina	1,038	686	837
South Carolina	912	581	859
Virginia	1,239	823	925
<b>SOUTHEAST</b>	<b>936</b>	<b>876</b>	<b>859</b>

**Figure 30 - Southeast Upland Yields**

Overall, cotton acreage in the Mid-South produced above-average yields in 2015. At 1,035 pounds, the 2015 harvest was only slightly below the high recorded in 2014. (Figure 31).

Tennessee had a record yield of 1,035, while Arkansas, Mississippi, and Missouri had impressive yields as well. At 1,112 pounds, Arkansas recorded the highest yield of the five states and bettered its 5-year average by 69 pounds. Mississippi's average yield of 1,021 pounds fell just short of its 5-year average. At 1,111 pounds, Missouri fell just short of the record high in the previous year. Unfortunately, Louisiana was the lone state in the region to post below-average yields. At 814 pounds per acre, Louisiana's yield was the lowest since 2009 and 162 pounds short of the 5-year average.

<b>Mid-South Upland Yields</b> Pounds per Harvested Acre			
	2014	2015	5-Year Average
Arkansas	1,145	1,112	1,043
Louisiana	1,154	814	976
Mississippi	1,203	1,021	1,059
Missouri	1,117	1,111	1,034
Tennessee	878	1,035	859
<b>MID-SOUTH</b>	<b>1,116</b>	<b>1,035</b>	<b>1,001</b>

**Figure 31 - Mid-South Upland Yields**

As previously discussed, while Oklahoma and Texas had significant rainfall in the first half of 2015, portions of the Southwest region continued to face drought conditions that limited yields, particularly in dryland fields. For the region as a whole, the average yield of 625 pounds per acre fell short of 2014 by 19 pounds and was 23 pounds below the 5-year average (Figure 32).

State-by-state results present a more mixed picture. Both Kansas and Oklahoma recorded record yields in 2015. At 864 pounds, Kansas bested the 5-year average by 200 pounds. The Oklahoma yield of 866 pounds represents an improvement of 226 pounds over the 5-year average. In contrast, Texas fell short of the 2014 yield, as well as the 5-year average. In Texas, the average yield of 613 pounds was 36 pounds below the 5-year average.

	2014	2015	5-Year Average
Kansas	794	864	664
Oklahoma	615	866	640
Texas	644	613	649
<b>SOUTHWEST</b>	<b>644</b>	<b>625</b>	<b>648</b>

**Figure 32 - Southwest Upland Yields**

The average upland yield in the West is estimated at 1,463 pounds, a figure that is 29 pounds below the 5-year average (Figure 33). The Arizona yield of 1,555 pounds and the California yield of 1,722 pounds were lower than the previous year but still above their 5-year averages. Unfortunately, growers in New Mexico did not have the same results. In New Mexico, the yield of 821 was the lowest since 2002.

	2014	2015	5-Year Average
Arizona	1,579	1,555	1,515
California	1,834	1,722	1,612
New Mexico	931	821	1,046
<b>WEST</b>	<b>1,549</b>	<b>1,463</b>	<b>1,492</b>

**Figure 33 - West Upland Yields**

The national average ELS yield is estimated at 1,348 pounds, down 84 pounds from 2014 and 66 pounds below the 5-year average (Figure 34). With the majority of ELS acres, California heavily influences the U.S. average. With an average yield of 1,490 pounds, California was 66 pounds below the previous year but slightly higher than their 5-year average. At 904 pounds, ELS yields

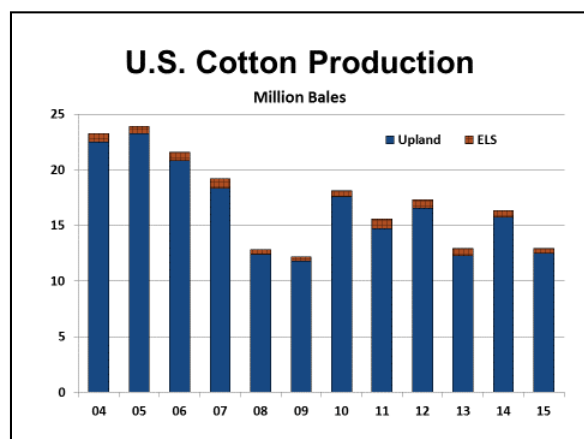
in Arizona fell well below both 2014 and the 5-year average. New Mexico's yield of 1,043 pounds is one of the highest on record for the state. With a yield of 896 pounds, Texas ELS yields exhibited a 56 pound improvement from 2014.

	2014	2015	5-Year Average
Arizona	993	904	989
California	1,558	1,490	1,469
New Mexico	761	1,043	851
Texas	840	896	921
<b>U.S.</b>	<b>1,432</b>	<b>1,348</b>	<b>1,414</b>

**Figure 34 - ELS Yields**

## Production

USDA's latest estimate places the 2015 U.S. cotton crop at 12.9 million bales (Figure 35), down 3.4 million bales from 2014. The 20.7% decrease in production comes as U.S. producers planted the lowest acreage since 1983. The 2015 crop represents a 2.9 million bale decrease relative to the 5-year average. Upland production is estimated at 12.5 million bales, and ELS farmers harvested 435 thousand bales.



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

In 2015, the Southeast is estimated to have produced 3.8 million bales, accounting for 30.5% of the total upland crop (Figure 36). With lower yields in all states except Georgia and the lowest acreage since 2009, the region's 2015 crop was down by 1.3 million bales from the 2014 total.

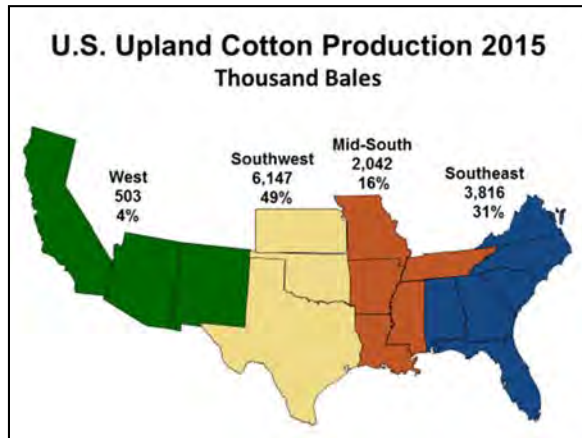


Figure 36 - U.S. Upland Cotton Production 2015

For 2015, the Mid-South accounted for 16.3% of the total U.S. upland crop. At 2 million bales, the 2015 crop was the lowest since 1983 as the region recorded a record low level of planted acres. Although production is down, yields for the region were above the 5-year average.

At 6.1 million bales, production in the Southwest accounted for 49.1% of the U.S. upland crop. The 345 thousand bale decrease from 2014 resulted from a decline in planted area by 1.4 million acres, which is the lowest amount of planted acreage since 1989.

The West produced 503 thousand bales of upland cotton in 2015, down 265 thousand bales from the region's 2014 crop. The region accounted for 4.0% of U.S. production. The Western crop also fell well short of the 5-year average by almost 600 thousand bales. The smaller crop was due to reduced plantings and lower yields across the region.

The 2015 ELS crop of 435 thousand bales was 130 thousand bales lower than 2014, and fell short of the 5-year average by 230 thousand bales. At 360 thousand bales, the California ELS crop was down 140 thousand bales from 2014 (Figure 37). The state accounted for 82.8% of the total 2015 U.S. ELS crop. Arizona's ELS crop increased slightly to 32 thousand bales, the largest for the state since 1998. At 28 thousand bales, Texas produced its second largest crop since 2007. New Mexico's 15,000 bales were also the largest since 2006.



Figure 37 - U.S. ELS Cotton Production 2015

## Stock Levels

With U.S. cotton production exceeding total demand for the 2014 marketing year, the resulting carryout from the 2014 marketing year, and equivalent carry-in or beginning stocks for the 2015 marketing year, stood at 3.7 million bales (Figure 38). That represented an increase of almost 1.4 million bales from the stocks that were brought into the 2014 marketing year. Upland stocks totaled 3.4 million bales, while ELS stocks stood at 259 thousand bales.



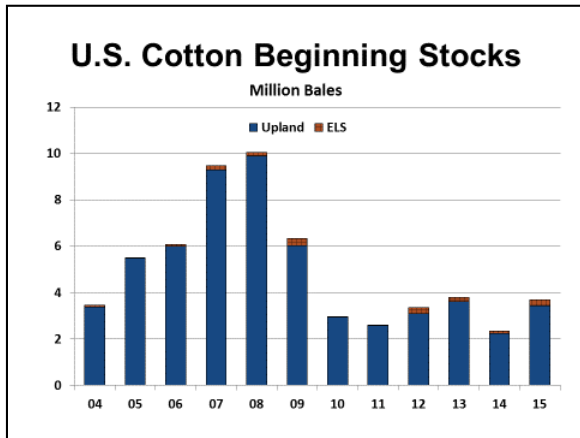


Figure 38 - U.S. Cotton Beginning Stocks

With increased production and weak market prices, total bales of 2015 upland cotton under the CCC loan reached 3.9 million bales in December. Cotton under the CCC loan is up from 2014 crop levels, but still slightly below the approximately 4 million bales for each of the 2010 through 2012 crops.

As of December 31, 2015, outstanding CCC loan stocks were 3.9 million bales (Figure 39), up from 2.4 million bales in 2014. The Mid-South accounts for approximately 26.5% of cotton placed under loan, while the Southwest accounts for another 46.1% of the U.S. total. The Southeast comprises another 22.8% of the cotton under CCC loan, with the remaining 4.5% in the West.

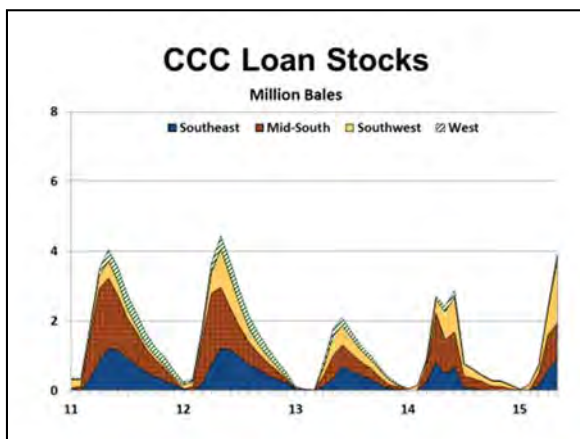


Figure 39 - CCC Loan Stocks

## Total Supply

Total supply for the 2015 marketing year is estimated to be 16.7 million bales, down from 18.7 million bales the previous year (Figure 40). The reduced supplies result from lower production more than offsetting the higher beginning stocks. Total supplies for the 2015 marketing year are 2.5 million bales below the 5-year average.

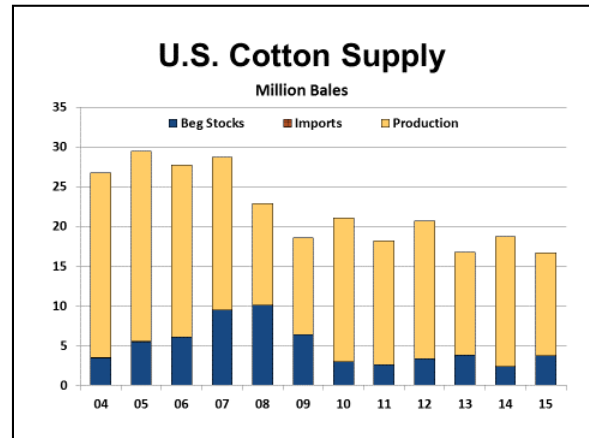


Figure 40 - U.S. Cotton Supply

## Upland Cotton Quality

With 11.7 million running bales classed through January 28, the national average staple length (measured in thirty-second's of an inch) is 35.9, up from a 5-year average of 35.6 (Figure 41). The Southeast staple length of 35.8 is 0.2 thirty-seconds of an inch better than their 5-year average. In the Mid-South, the average staple length of 36.9 is a new record for the region, exceeding the 5-year average by 1.1 thirty-second's and the previous record of 36.2. The Southwest's average staple length of 35.6 exceeds the 5-year average of 35.3. The West reports an average staple length of 36.9, up 0.1 from the 5-year average.

2015 Crop Staple and Strength				
	Staple		Strength	
	2015	5-Year	2015	5-Year
Southeast	35.8	35.6	28.6	29.3
Mid-South	36.9	35.8	32.0	30.7
Southwest	35.6	35.3	30.7	30.0
West	36.9	36.8	32.2	31.5
U.S.	35.9	35.6	30.4	30.0

Figure 41 - 2015 Crop Staple and Strength

The strength of the 2015 upland crop, averaging 30.4 grams per tex (gpt), is above the 5-year average of 30.0. The highest strength occurs in the West, with an average of 32.2 gpt, exceeding the 5-year average of 31.5. At 28.6 gpt, the Southeast falls short of its 5-year average. The Southwest crop has an average strength of 30.7 gpt, which is 0.7 better than the 5-year average. The strength of the 2015 Southwest crop would be an all-time high. In the Mid-South, an average strength of 32.0 gpt is 1.3 above the 5-year average and an all-time high.

Overall, color grades for the 2015 crop are below average. In total for the Cotton Belt, 70.4% of the 2015 crop is grading 41 or better, which compares to a 5-year average of 89.5% (Figure 42). For all regions, the average color grade is below the 5-year average. In the West, color grades are just slightly below the 5-year average. Late season rainfall resulted in lower color grades for the Mid-South and Southwest. In the Southeast, flooding and excessive moisture delayed harvest and resulted in very low color grades.

2015 Crop Color and Mike				
	%SLM+		Micronaire	
	2015	5-Year	2015	5-Year
Southeast	42.5	85.4	47.5	46.4
Mid-South	88.3	95.1	46.6	47.5
Southwest	78.9	88.3	41.4	43.0
West	92.4	94.6	45.0	44.2
U.S.	70.4	89.5	44.3	45.3

Figure 42 - 2015 Crop Color and Mike

The average micronaire of the 2015 upland cotton crop is 44.3, which is below the 5-year average of 45.3. In the Southeast, the average micronaire of 47.5 was above the 5-year average. The upland crop in the West, with a mike of 45.0, was also higher than the 5-year average. In the Mid-South and the Southwest, the average micronaire was below the 5-year averages.

## Cotton Prices

### Upland Cotton Prices

Cotton prices experienced a pronounced decline during calendar 2014 and have stayed in a relatively tight range throughout 2015. Prices began the year trading in the \$0.59-to-\$0.62 range that prevailed for the last half of 2014 (Figure 43). Throughout 2015, NY futures have traded in the low to mid 60's and the "A" Index has stayed in the high 60's to low 70's range. The nearby New York futures and the Cotlook "A" Index maintained a relationship consistent with historical experience.

Prices continued to remain under pressure as other commodity markets weakened and the dollar began to strengthen. While world production is down in all of the major cotton producing countries, prices have not recovered. In early 2016, bearish factors are still prevalent in the market. Cotton demand, though slowly increasing, has thus far failed to rebound to meet expectations and textile



mills are cautious to do any more than hand-to-mouth buying until a market bottom is perceived.



Figure 43 - Nearby NY and "A" (FE) Index

Spot prices in the U.S. followed a similar pattern to the futures market and the "A" Index. Thus far into the 2016 marketing year, spot 4134 values have averaged \$0.61 per pound with a maximum price of \$0.64 per pound and a minimum price of \$0.58 per pound (Figure 44). The average spot 4134 value for the 2014 crop cotton was \$0.62 cents per pound.

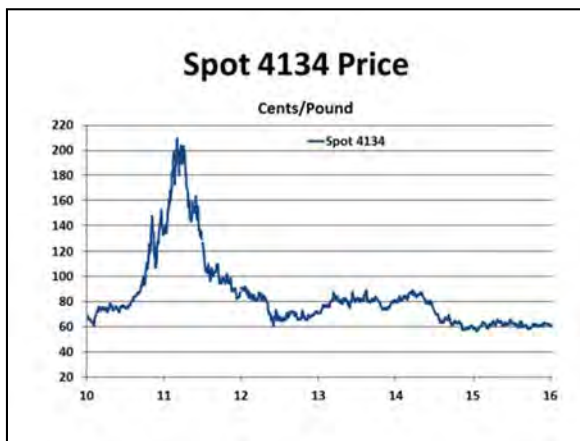


Figure 44 - Spot 4134 Price

**ELS Prices**

For 2015, ELS prices dropped significantly more than upland prices. ELS cotton prices began 2015 at \$1.75 per pound and ended the year at \$1.39 (Figure 45). Prices have declined throughout the year due to sluggish

export business. International mills were reluctant to pay the higher prices for U.S. ELS cotton, particularly with Egyptian cotton being offered at a significant discount.



Figure 45 - ELS Spot Price

**Cottonseed Situation**

**Cottonseed Supply**

USDA estimates 2015 cottonseed production at 4.1 million tons, down 1 million tons from the previous year (Figure 46). The changes in cottonseed production generally mirror the movements in cotton lint production as average seed-to-lint ratios have remained relatively stable compared to 2014. From a longer term perspective, seed-to-lint ratios, recently ranging between 1.36 and 1.38, are down over the past 15 years from a range of 1.55 to 1.60.

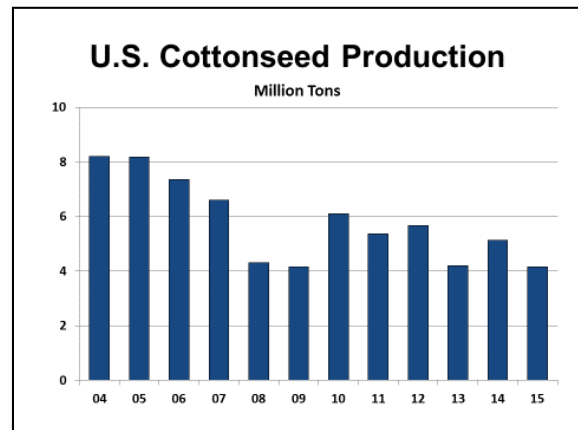


Figure 46 - U.S. Cottonseed Production

For the 2015 crop, a regional breakdown of production shows that the Southwest produced 1.9 million tons or 48.2% of the total, the largest of any region (Figure 47). They were followed by the Southeast with estimated production of 1.1 million tons for a 27.3% share. The Mid-South produced 691 thousand tons, or 16.6% of total production, and the West accounted for 327 thousand tons, 7.9% of the total.

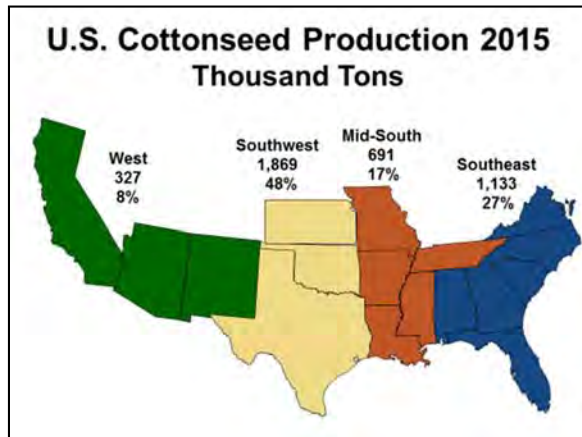


Figure 47 - U.S. Cottonseed Production 2015

Supplementing U.S. production, beginning stocks of 437 thousand tons bring total cottonseed supply for the 2015 marketing year to 4.6 million tons (Figure 48). Total supplies for 2015 are down by almost 1 million tons from the previous year. The 2015 total is 1.2 million tons lower than the 5-year average.

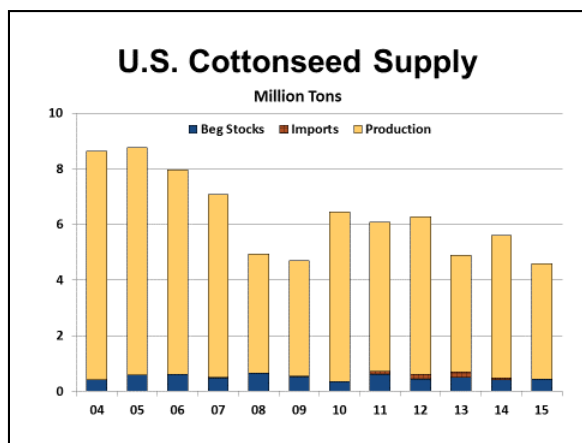


Figure 48 - U.S. Cottonseed Supply

### Disappearance and Stock Levels

USDA's January estimates for 2015 cottonseed disappearance show a crush level of 1.65 million tons for 2015, 250 thousand tons less than the previous year (Figure 49). *Cottonseed Digest* indicates that current crush economics are not strong enough to encourage a significant increase in crushing.

With decreased supplies, whole seed feeding is estimated to drop to 2.45 million tons for the 2015 marketing year, which is the lowest level since 2009. Estimated exports of 100 thousand tons are down from previous years.

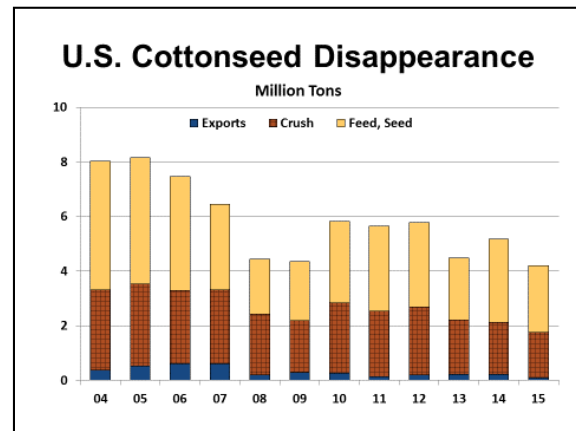


Figure 49 - U.S. Cottonseed Disappearance

As a result of lower supplies, cottonseed stocks are projected to drop to 392 thousand tons, which is the lowest level since 2009 (Figure 50).

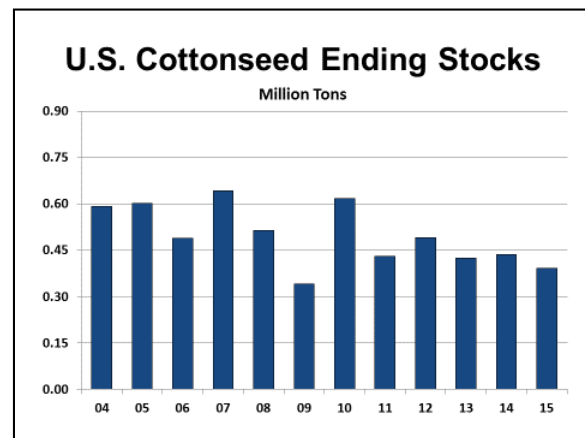


Figure 50 - U.S. Cottonseed Ending Stocks

### Cottonseed Prices

The movement in cottonseed prices reflects changes in competing feed prices as well as available supplies. Cottonseed prices were significantly lower in 2015 as compared to 2014. However, prices did strengthen modestly throughout most of 2015 before drifting slightly down in November 2015. The average cottonseed spot price declined to \$270 per ton in December and has remained at this level in the first half of January. There are concerns that prices will drift lower if demand does not improve in the coming months.

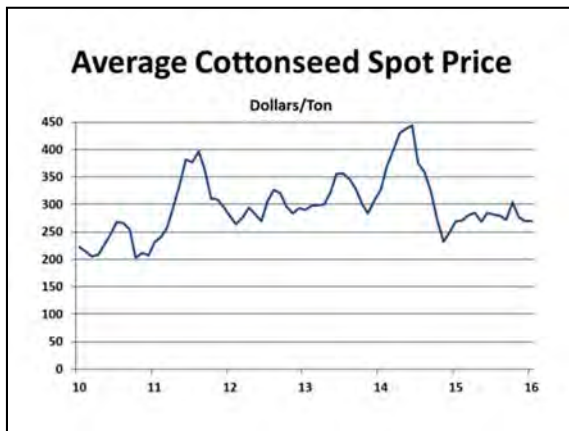


Figure 51 - Average Cottonseed Spot Price

### 2016 Planting Intentions Price Prospects

Cotton growers are approaching the 2016 planting season with harvest-time futures contracts at similar levels as the previous year. Cotton prices have remained low since the second half of 2014 and throughout 2015. As of late January, the December 2016 contract was trading at \$0.62 per pound, which is very similar to year-ago levels (Figure 52). Record high global stocks of cotton and expectations for reduced imports by China are contributing to the weaker price environment.

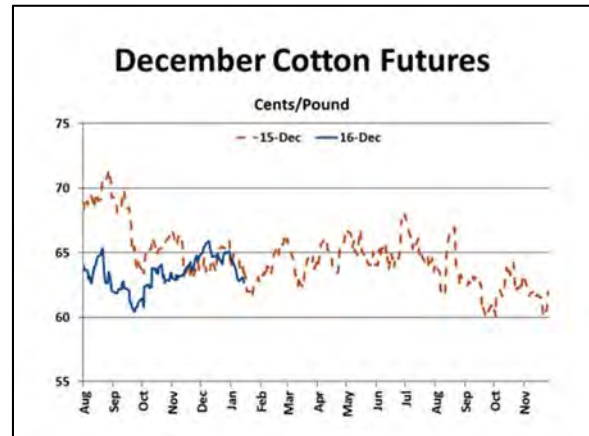


Figure 52 - December Cotton Futures

Weak prices are not limited to cotton as grain and oilseed prices are below year-ago levels. As of late January, the December 2016 contract for corn was trading at \$3.82 per bushel, as compared to \$4.15 for a comparable time for the 2015 contract (Figure 53). Weak export demand, lower livestock prices, large corn crops in the last three years, and slowing growth for renewable fuels are contributing to the weaker prices.

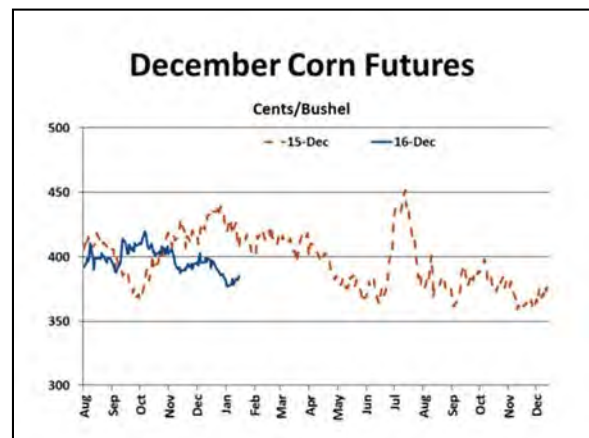


Figure 53 - December Corn Futures

Soybean prices, as measured by the Chicago Board of Trade November futures contract, have also weakened relative to year-earlier levels. By late January, the November 2016 contract traded at \$8.59 per bushel, approximately \$1.16 lower than the November 2015 contract was trading a year earlier (Figure 54). The dynamics in the

soybean balance sheet are similar to those of corn as a large 2015 harvest will lead to an increase in stocks.

Relative to 2015, soybean futures prices are down by 12.0% while corn prices are trading 8.0% below year-ago levels. Cotton prices remain low but are still trading at the same level as a year ago. However, given the relatively lower costs of production, soybeans are expected to provide some competition for cotton in 2016 acreage decisions.

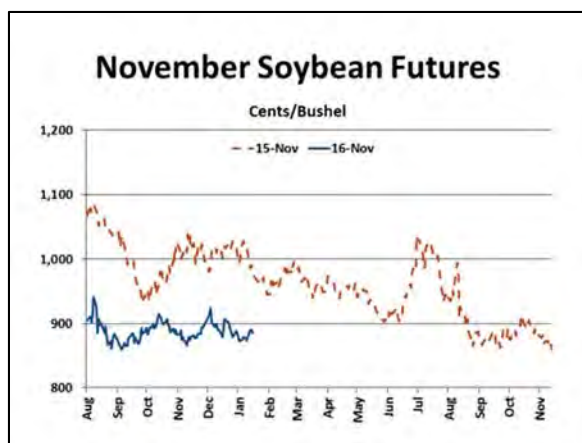


Figure 54 - November Soybean Futures

As growers consider their 2016 planting decisions, they will compare prices for cotton, corn, soybeans and other regional crops. Growers will also be influenced by production costs. Given the recent decline in oil prices, diesel fuel costs should be substantially below 2015 levels. A question mark remains for fertilizer costs. 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.

### 2016 U.S. Cotton Acreage Intentions

In mid-December 2015, the NCC distributed the annual early season planting intentions survey. Respondents are asked to give their plantings of cotton, corn, soybeans, wheat, and other crops for 2015 and intended

acreage for 2016. 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.

Beginning with the Southeast, survey results indicate a 5.1% decrease in the region's upland area to 2.1 million acres (See Table 4 on page 44). Declines are expected in four of the six states in the region as cotton acres move into competing crops. Even with the expected reduction, cotton acreage in the region remains well above the recent low of 1.9 million acres registered in 2009.

The largest percentage decline is in North Carolina where growers report intentions down 19.0% to 312 thousand acres. In South Carolina, intentions indicate a 13.5% drop, giving the state 203 thousand acres. Both Georgia and Virginia report a more modest drop in acreage. Growers in Georgia intend to plant 1.1 million acres, down 5.0% from 2015, while Virginia will cut cotton acres by 1.0%, bringing the total down to 84 thousand acres.

In Alabama, the survey responses indicate a 9.3% increase in cotton acreage, resulting in 344 thousand acres. Florida reports the largest percentage increase in this region where growers intend to plant 104 thousand acres, up 22.7% from 2015.

In the Mid-South, growers have demonstrated their ability to adjust acreage based on market signals. This year's survey results are no different with growers intending to plant 1.2 million acres, an increase of 24.9% from the previous year. All states in the region responded with intentions to plant more cotton in 2016.

Mississippi reports the largest increase of 40.0%, giving a state-wide total of 448

thousand acres. Growers in Tennessee indicate an increase of 24.8%, bringing cotton area up to 193 thousand acres. Growers in Missouri intend to plant 211 thousand acres of cotton, up 14.0%. Louisiana will increase acreage by 8.0%, giving the state 124 thousand acres of cotton. In Arkansas, the survey indicates that cotton acreage will rise to 254 thousand acres, up 21.0% from 2015.

In Arkansas, Louisiana, and Mississippi, the respondents indicate a reduction in wheat, soybeans and 'Other Crops', which is likely peanuts or grain sorghum. In Missouri, cotton acreage is expected to increase while acreage of corn, soybeans, and 'Other Crops' is expected to decline. In Tennessee, acreage of corn, wheat, and 'Other Crops', likely sorghum, is expected to move into cotton.

Growers in the Southwest intend to plant 5.3 million acres of cotton, an increase of 6.1%. Increases in cotton area are expected in each of the three states.

Growers in Kansas intend to plant 24 thousand acres, a 47.3% increase from the 2015 total of 16 thousand. Acreage in Oklahoma is showing a 14.4% increase, bringing the total for the state to 246 thousand acres. For Texas, survey respondents intend to increase area by 5.6%, increasing the state total to 5.1 million acres.

In Kansas, land shifting back into cotton is moving away from wheat and the 'Other Crops' category, likely grain sorghum. Wheat acres are expected to be reduced based on the Oklahoma survey results. In Texas, a large increase in south Texas offsets a slight decline in acreage in the Blacklands and west Texas. Respondents in south Texas reported more cotton acreage as land shifts away from wheat, soybeans, grain sorghum, and cotton reclaims some land idled due to excessive moisture in

2015. Respondents from the Blacklands are moving predominantly to corn and soybeans. In west Texas, little to no change is expected in cotton acreage while acreage of all other crops increases slightly as more farm acreage comes into production.

With upland intentions of 213 thousand acres, cotton producers in the West are expecting to plant 24.4% more acres of upland cotton.

Upland intentions are up significantly in Arizona but down slightly in the other states. Respondents for Arizona indicate a large increase of 54.2% with plantings of 137 thousand acres. California intends to plant 46 thousand acres, down 1.4% from year-ago levels. The survey for New Mexico puts 2016 acreage down 16.6% to 29 thousand acres.

The survey results for Arizona suggest a shift from wheat, soybeans, and 'Other Crops' to cotton. Arizona growers are also expecting to plant 34.8% more ELS cotton. In New Mexico, the responses indicate a shift to ELS cotton.

Summing across the 4 regions gives intended 2016 upland cotton area of 8.9 million acres, 5.7% above 2015.

With expectations of improved water availability in California for 2016, survey results indicate that U.S. cotton growers intend to increase ELS plantings 31.2% to 208 thousand acres in 2016. The state-level results show increases across all four ELS-producing states. Results are as follows: Arizona planting 24 thousand acres (+34.8%); California planting 155 thousand acres (+32.4%); New Mexico planting 12,000 acres (+68.0%); and Texas planting 18,000 acres (+4.2%).

Summing together the upland and ELS cotton intentions shows U.S. all-cotton



plantings in 2016 of 9.1 million acres, 6.2% higher than 2015 (See Table 4 on page 44 and Figure 55).

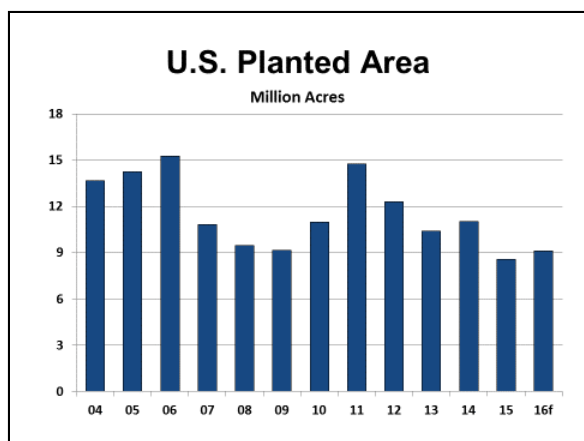


Figure 55 - U.S. Planted Area

### 2016 U.S. Cotton and Cottonseed Supply

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, 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 11.0%, Cotton Belt harvested area totals 8.1 million acres (Figure 56). Using an average 2016 U.S. yield of 830.6 generates a cotton crop of 14.0 million bales, with 13.4 million bales of upland and 595 thousand bales of ELS.

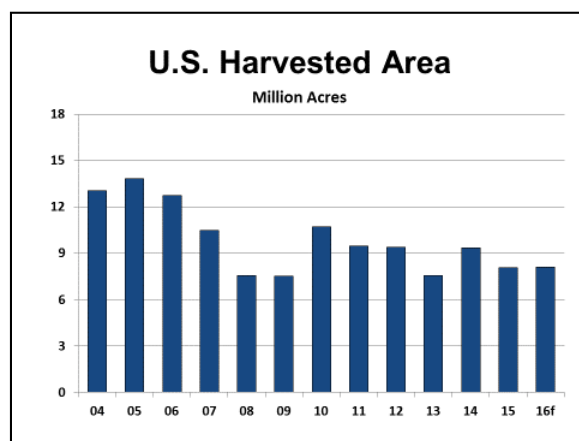


Figure 56 - U.S. Harvested Area

Combining projected production with expected beginning stocks of 3.4 million bales and imports of 10 thousand bales gives a total U.S. supply of 17.4 million bales (Figure 57). This is an increase of 785 thousand bales from the 2015 level.

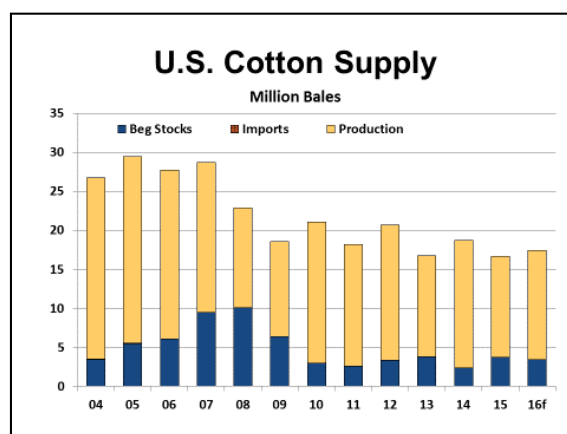
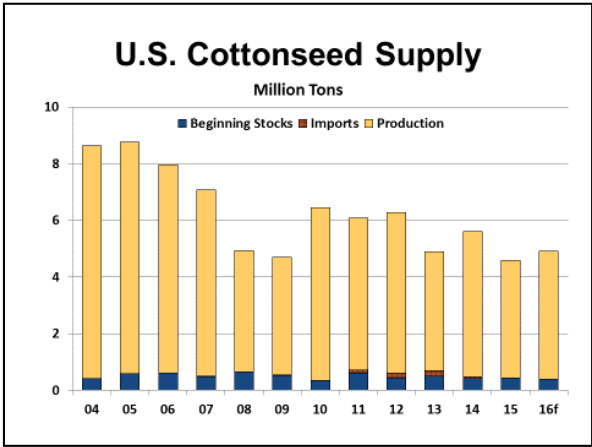


Figure 57 - U.S. Cotton Supply

For cottonseed, multiplying the point estimate of lint production by an average lint-seed ratio generates expected production of 4.5 million tons. With 392 thousand tons of beginning stocks, 2016 cottonseed supply totals 4.9 million tons (Figure 58).



**Figure 58 - U.S. Cottonseed Supply**

**Table 4 - Prospective 2016 U.S. Cotton Area**

	2015 Actual (Thou.) 1/	2016 Intended (Thou.) 2/	Percent Change
<b>SOUTHEAST</b>	<b>2,235</b>	<b>2,121</b>	<b>-5.1%</b>
Alabama	315	344	9.3%
Florida	85	104	22.7%
Georgia	1,130	1,073	-5.0%
North Carolina	385	312	-19.0%
South Carolina	235	203	-13.5%
Virginia	85	84	-1.0%
<b>MID-SOUTH</b>	<b>985</b>	<b>1,230</b>	<b>24.9%</b>
Arkansas	210	254	21.0%
Louisiana	115	124	8.0%
Mississippi	320	448	40.0%
Missouri	185	211	14.0%
Tennessee	155	193	24.8%
<b>SOUTHWEST</b>	<b>5,031</b>	<b>5,336</b>	<b>6.1%</b>
Kansas	16	24	47.3%
Oklahoma	215	246	14.4%
Texas	4,800	5,066	5.6%
<b>WEST</b>	<b>171</b>	<b>213</b>	<b>24.4%</b>
Arizona	89	137	54.2%
California	47	46	-1.4%
New Mexico	35	29	-16.6%
<b>TOTAL UPLAND</b>	<b>8,422</b>	<b>8,901</b>	<b>5.7%</b>
<b>TOTAL ELS</b>	<b>159</b>	<b>208</b>	<b>31.2%</b>
Arizona	18	24	34.8%
California	117	155	32.4%
New Mexico	7	12	68.0%
Texas	17	18	4.2%
<b>ALL COTTON</b>	<b>8,581</b>	<b>9,109</b>	<b>6.2%</b>

1/ USDA-NASS

2/ National Cotton Council



## U.S. Market

### U.S. Textile Industry

Preliminary data from the U.S. Bureau of Labor Statistics indicate that textile industry employment in 2015 fell by approximately 4,400 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

Mill use of cotton increased from the previous year and is estimated at 3.56 million bales in calendar 2015, 1.0% above 2014 (Figure 59). For calendar 2016, NCC forecasts domestic mill use of cotton at 3.63 million bales and estimates the 2015 marketing year at 3.60 million bales (Figure 60). NCC projects domestic mill use of cotton at 3.65 million bales for the 2016 marketing year.

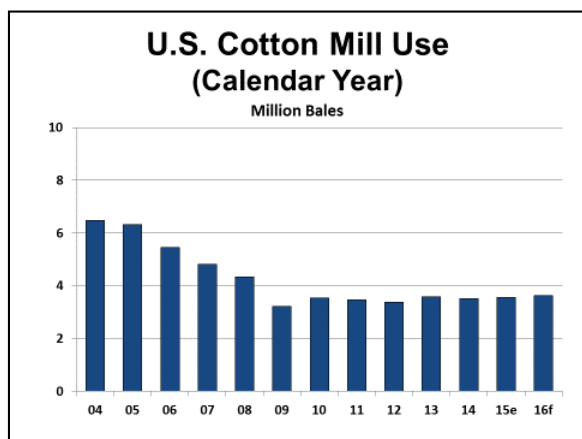


Figure 59 - U.S. Cotton Mill Use (Calendar Year)

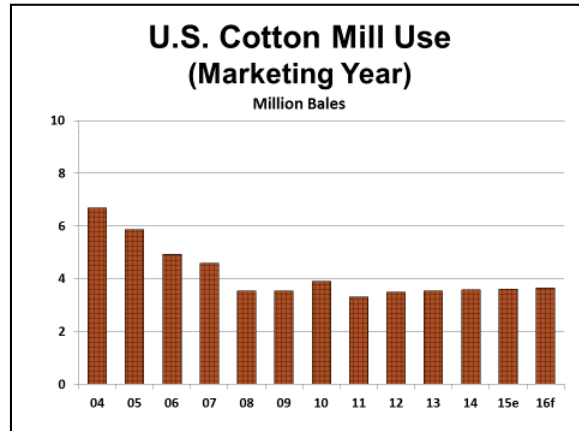


Figure 60 - U.S. Cotton Mill Use (Marketing Year)

U.S. mill consumption of manmade fibers increased in 2015. NCC estimates mill use of manmade fibers at 16.9 million bales for 2015, an increase of 4.0% from 2014 (Figure 61). Manmade fiber mill use is projected to increase to 17.1 million bales in calendar 2016.

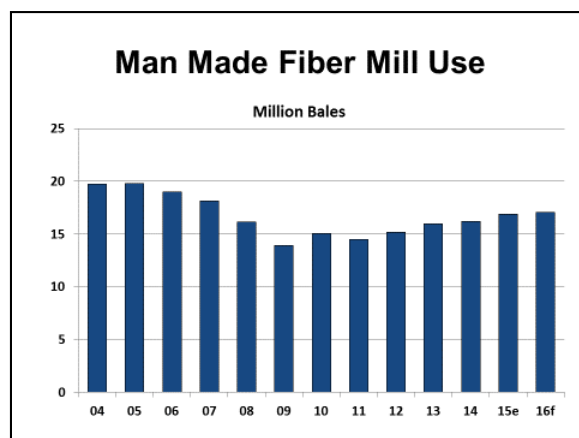


Figure 61 - Man Made Fiber Mill Use

### Upland Cotton Economic Adjustment Assistance Program

The Upland Cotton Economic Adjustment Assistance Program (EAAP), re-authorized in the 2014 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. In fiscal year 2015, over 40 U.S. companies received payments under the EAAP.

### Net Domestic Consumption

Net domestic consumption is a measure of the U.S. retail market's size. It measures both cotton spun in the U.S. (mill use) and cotton consumed through textile imports. Total fiber consumption in 2015 is estimated to be 51.3 million bale equivalents (Figure 62). Cotton's share of net domestic consumption decreased 0.9% this past year to 35.2%, which translates to 18.1 million bales. For 2016, NCC projects net domestic consumption of all fibers to increase to 53.1 million bales. With a projected share of 34.9%, cotton's net domestic consumption is projected to be 18.5 million bales.

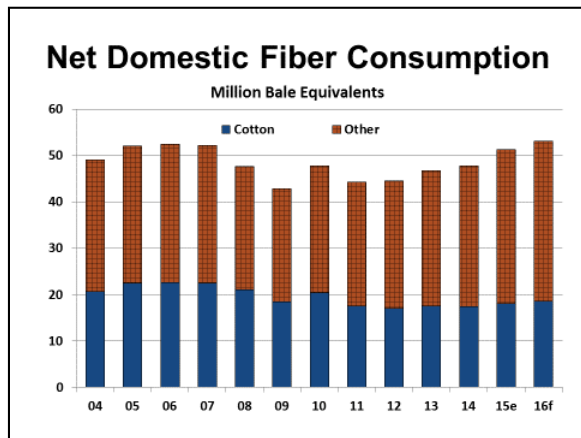


Figure 62 - Net Domestic Fiber Consumption

Imported goods make up the largest portion of U.S. net domestic consumption. Imported cotton textiles increased from 17.5 million bale equivalents in 2014 to an estimated 18.3 million in 2015 (Figure 63).

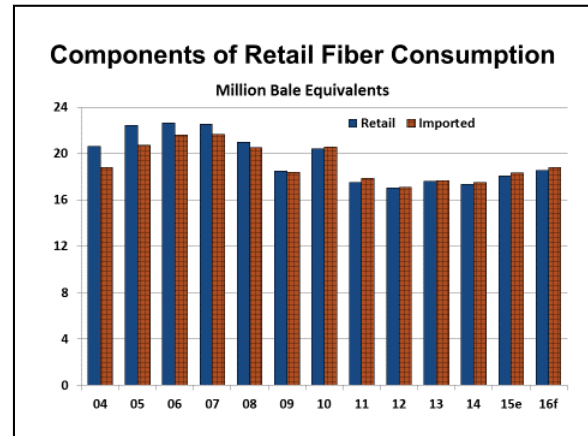


Figure 63 - Components of Retail Cotton Consumption

### Textile Trade

Imports of cotton goods in calendar 2015 were estimated to have increased by 4.9% to 18.3 million bale equivalents (Figure 64). In calendar 2016, NCC projects cotton textile imports to increase to 18.8 million bales.

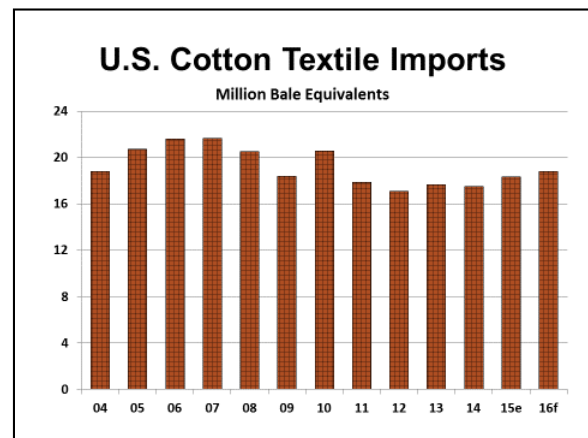


Figure 64 - U.S. Cotton Textile Imports

For 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 27.0% of all cotton goods imported in 2015 contained U.S. cotton. This is a 0.62%

decrease over the previous year. In bale equivalents, these imported cotton goods contained 5.0 million bales of U.S. cotton (Figure 65). This is due, in large part, to our trading partners in NAFTA and the CBI.

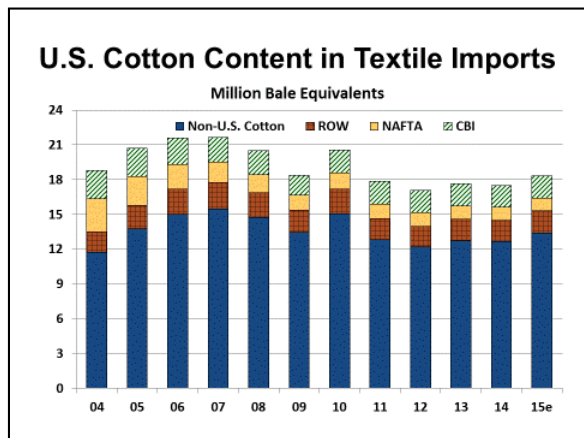


Figure 65 - U.S. Cotton Content in Textile Imports

### U.S. Cotton Product Imports

Apparel was once again the largest category of imported cotton goods when compared to yarn, thread and fabric, and home furnishings (Figure 66). Cotton apparel imports were estimated at 13.1 million bale equivalents for 2015, up 3.2% from 2014. Imports of cotton home furnishings (including floor coverings) increased 10.7% in 2015 to an estimated 3.7 million bale equivalents. Cotton yarn, thread and fabric imports increased 6.5% in 2015 to an estimated 1.5 million bales.

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 2015 were 2.1 million, or 86.2% of the cotton textile imports from CBI. Combined, imports from NAFTA and CBI countries increased 3.1% and accounted for 19.6% of total U.S. cotton product imports in 2015.

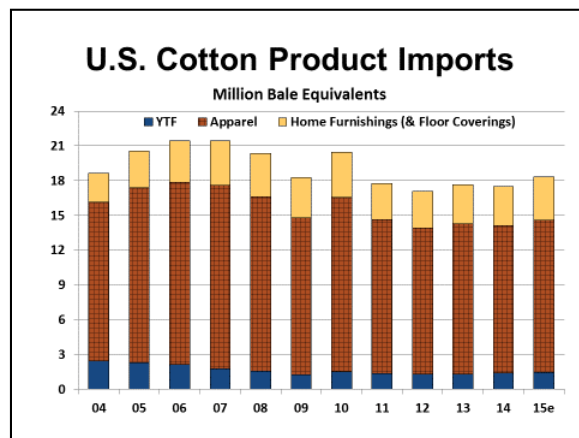


Figure 66 - U.S. Cotton Product Imports

Once again, countries in NAFTA and CBI represented significant sources of imported cotton goods in 2015 (Figure 67). Imports from Mexico in 2015 were estimated at 1.1 million bales, down approximately 4.4% from the previous year (Figure 68). Imports of cotton goods from Canada grew to an estimated 77 thousand bales in 2015, rising 7.5% from the previous year (Figure 69). Imported cotton goods from CBI for the year were estimated at 2.5 million bale equivalents (Figure 70), up 6.6% from the previous year. The CAFTA-DR countries of

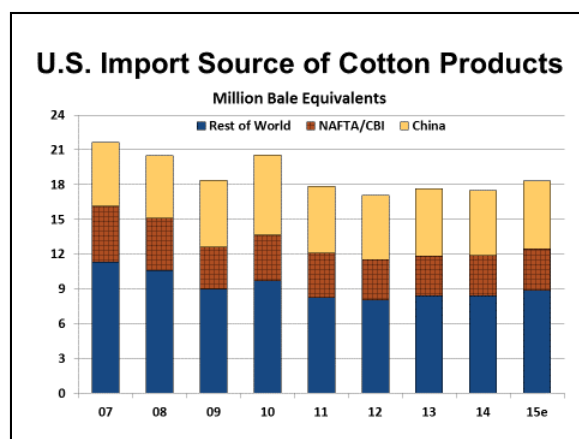


Figure 67 - U.S. Import Source of Cotton Products

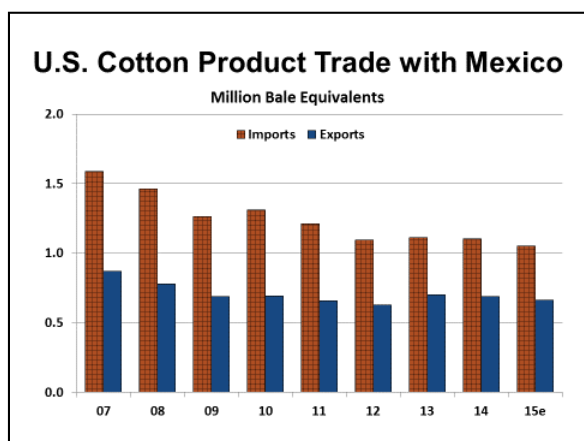


Figure 68 - U.S. Cotton Product Trade with Mexico

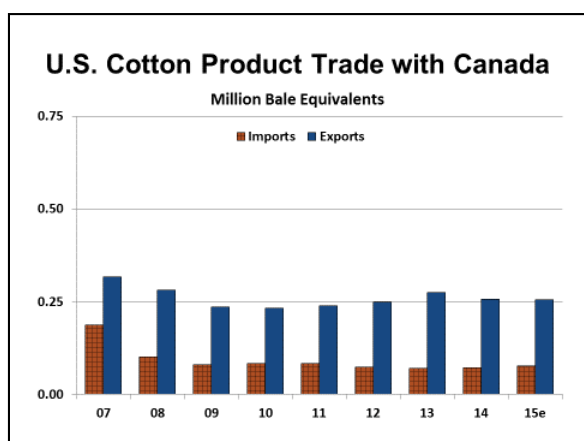


Figure 69 - U.S. Cotton Product Trade with Canada

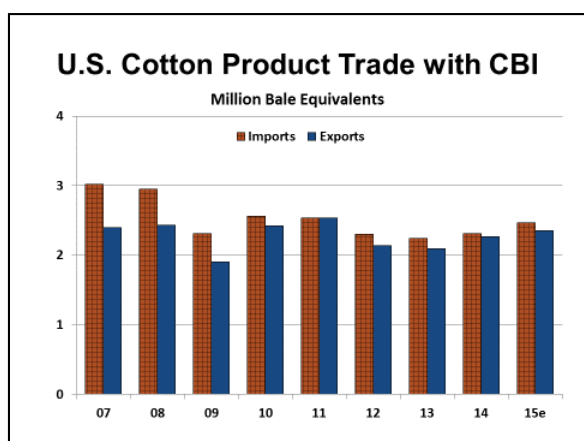


Figure 70 - U.S. Cotton Product Trade with CBI

Other top sources of imported cotton goods in 2015 were China, Pakistan, India, Hong Kong, Bangladesh, Vietnam, South Korea, and Turkey. For the eleventh consecutive year, China was the largest supplier of

cotton textile imports into the U.S. (Figure 71). Total cotton product imports from China increased to an estimated 5.9 million bale equivalents in 2015, up 5.4% from 2014 and up by approximately 617% 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 32.1% in 2015.

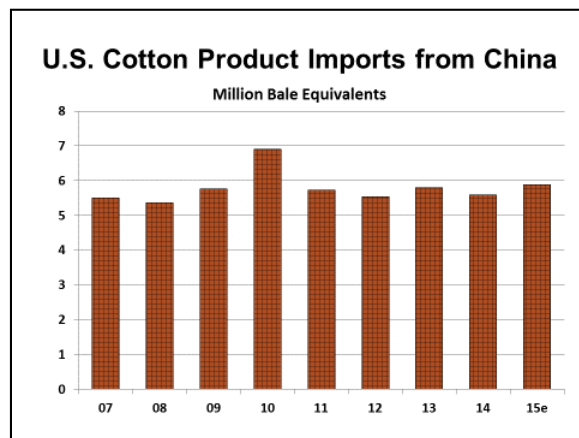


Figure 71 - U.S. Cotton Product Imports from China

Imports of cotton products from Pakistan are estimated at 1.6 million bale equivalents in 2015, an increase of over 250 thousand bales. Pakistan's share of imported cotton goods in the U.S. market decreased last year to 8.5%.

Imports from India stood at 1.8 million bale equivalents for 2015. This was a 14.2% increase from last year. India now accounts for 10.1% of all U.S. cotton product imports.

Imports from Hong Kong in 2015 were 29 thousand bale equivalents, up 41.7% from 2014. Hong Kong's share of imported cotton goods in the U.S. rose slightly to 0.2% in 2015.

Bangladesh showed an increase in cotton product imports into the U.S. when compared to the previous year. Imports from Bangladesh in 2015 were up 10.0% from 2014 to 1.3 million bale equivalents.

Bangladesh accounted for an estimated 7.1% of all cotton goods imported into the U.S. in 2015.

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 1.4 million bale equivalents in 2015, up 11.0% from 2014. Vietnam’s share of cotton goods imported into the U.S. in 2015 increased to 7.5%, up 0.4% from the previous year. Cotton product imports from South Korea decreased 1.6% from 2014 to 142 thousand bale equivalents in 2015.

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 expresses 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 2015. Cotton trousers remained the largest category of imported cotton goods from Mexico. Trousers accounted for 33.2% of all cotton product imports from Mexico based on SME (Figure 72). Knit cotton shirts were the next largest category of imports, accounting for 17.1%, followed by “other cotton apparel” (10.1%) and cotton hosiery (5.1%). The U.S. Customs Service category “other cotton apparel” includes items such as waistcoats, swimwear, bodysuits and scarves.

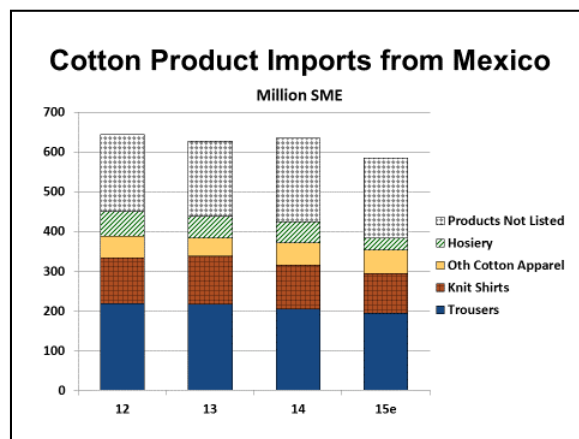


Figure 72 - Cotton Product Imports from Mexico

**Canada**

U.S. cotton imports from Canada increased slightly in 2015. The largest category of imports from Canada in 2015 was “other cotton manufactures”, which accounted for 24.9% of total SME of cotton product imports from Canada (Figure 73). The U.S. Customs Service category “other cotton manufactures” includes items such as tablecloths, napkins, dishtowels and pillow covers. The next largest category was “other cotton apparel” with 17.2% of total imports, followed by terry towels at 3.7% and cotton coats at 3.6%.

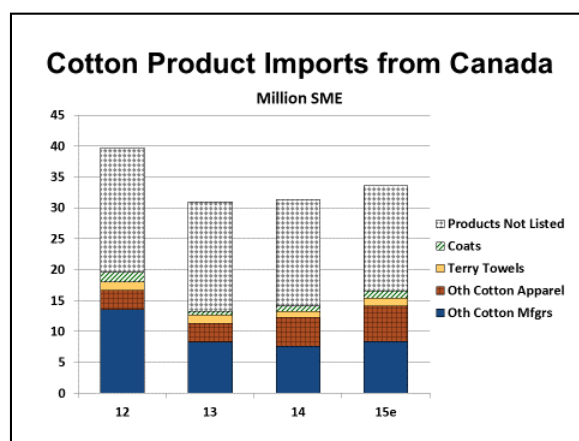


Figure 73 - Cotton Product Imports from Canada

**Caribbean Basin Initiative (CBI)**

Continuing the trend, CBI countries shipped more cotton goods to the U.S. than did NAFTA countries in 2015. The largest category of imported cotton goods from the

region was knit shirts, accounting for 42.8% of total imports, based on SME (Figure 74). Approximately 85.0% of the cotton knit shirt imports from CBI came from the CAFTA-DR countries. Underwear, the second largest category, accounted for 28.8% of imports, followed by cotton hosiery (12.2%) and trousers (9.9%). Of these imports, 88.3% of the underwear, 100.0% of the cotton hosiery and 86.7% of the cotton trousers were from the CAFTA-DR countries.

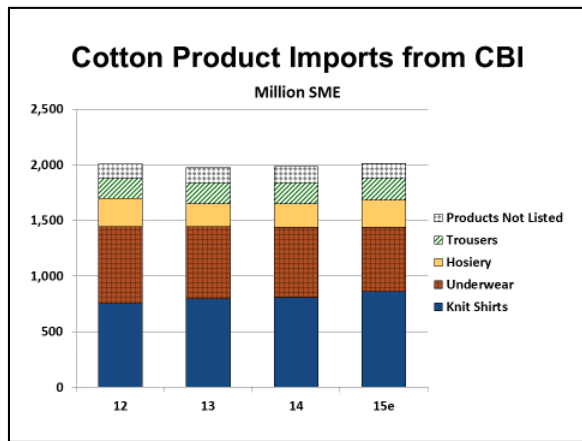


Figure 74 - Cotton Product Imports from CBI

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

Over the past year, total cotton apparel product imports from the AGOA region decreased by 0.1% to an estimated 104.3 million SMEs (Figure 75). However, during the past year, the percentage of U.S. cotton apparel imports from the AGOA region receiving preferential treatment under the act increased from 96.9% to 97.4%.

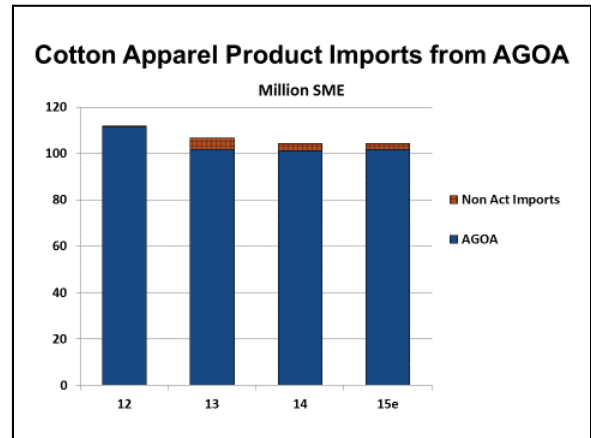


Figure 75 - Cotton Apparel Product Imports from AGOA

**Pakistan**

The largest category of imported goods from Pakistan in 2015 was “other cotton manufactures” (Figure 76). This category accounted for 44.0% of all cotton product imports from Pakistan based on SME. The second largest category imported from Pakistan was cotton sheets with 12.1% of total imports, followed by bedspreads and quilts (8.4%) and terry towels (4.9%).

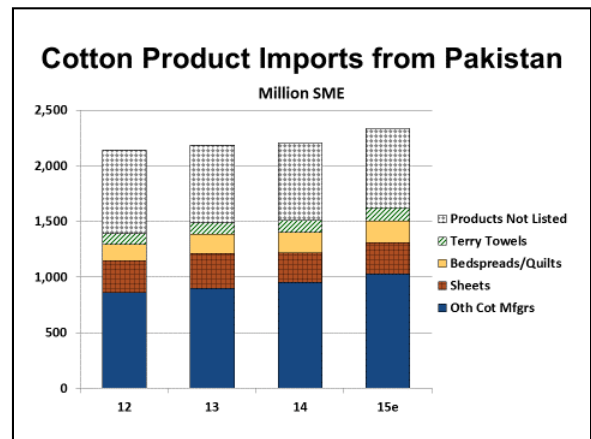


Figure 76 - Cotton Product Imports from Pakistan

**China**

Again last year, the single largest supplier of imported cotton goods into the U.S. market was China. On a SME basis, the largest category of cotton product imports from China in 2015 was “other cotton manufactures”, which accounted for 22.5% of all cotton product imports from that



country (Figure 77). Trousers was the second largest category, comprising 13.3% of total cotton product imports from that country. Nightwear accounted for 5.8% of U.S. cotton textile and apparel imports from China in 2015. Knit shirts was the fourth largest category and accounted for 5.0% of cotton product imports.

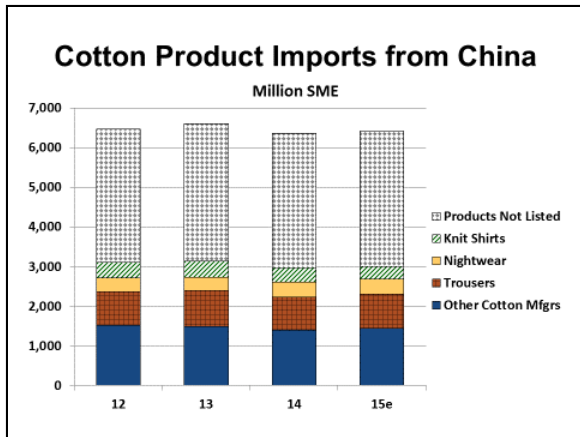


Figure 77 - Cotton Product Imports from China

**India**

As was the case with Pakistan and China, the largest category of imported cotton goods from India in 2015 was the category of “other cotton manufactures” (Figure 78). When based on SMEs, this category represented 33.0% of all cotton goods imported from India. The next largest category was cotton sheets (15.9%), followed by underwear (6.5%) and knit shirts (5.5%).

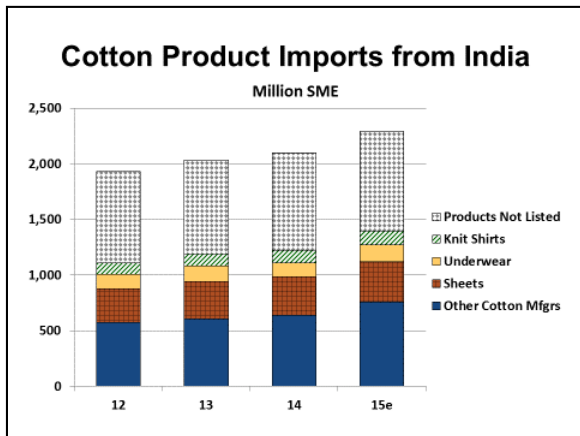


Figure 78 - Cotton Product Imports from India

**Hong Kong**

The largest category of imported cotton goods from Hong Kong in 2015 was “other cotton manufactures” (Figure 79). When looking at SMEs, “other cotton manufactures” accounted for 17.4% of all cotton products imported. The second largest category was trousers with 16.6% of imports, followed by woven shirts (9.6%) and “other cotton apparel” (6.3%).

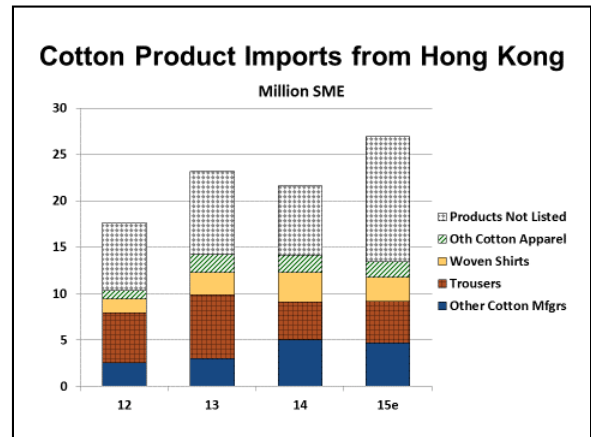


Figure 79 - Cotton Product Imports from Hong Kong

**Bangladesh**

Based on SMEs, the largest category of cotton goods imported from Bangladesh in 2015 (33.5%) was trousers (Figure 80). The second largest category in 2015 was woven shirts (16.8%). Cotton underwear was the third largest category in 2015, representing 15.1% of total cotton goods imported from Bangladesh, followed by knit shirts at 7.8%.



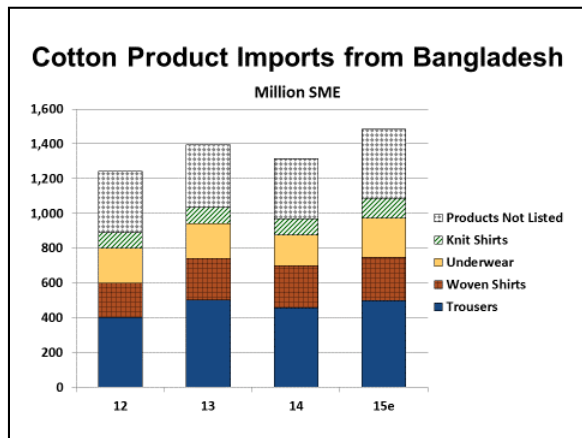


Figure 80 - Cotton Product Imports from Bangladesh

### Vietnam

Vietnam continues to be a more significant supplier of cotton product imports (Figure 81). U.S. cotton product imports from Vietnam have increased by over 6,000% 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 1.5 billion SME in 2015. The largest category of imported cotton goods from Vietnam in 2015 was underwear. Based on SMEs, this category represented 23.7% of all cotton goods imported from Vietnam. The next largest category was trousers (21.9%), followed by knit shirts (18.6%) and woven shirts (6.1%).

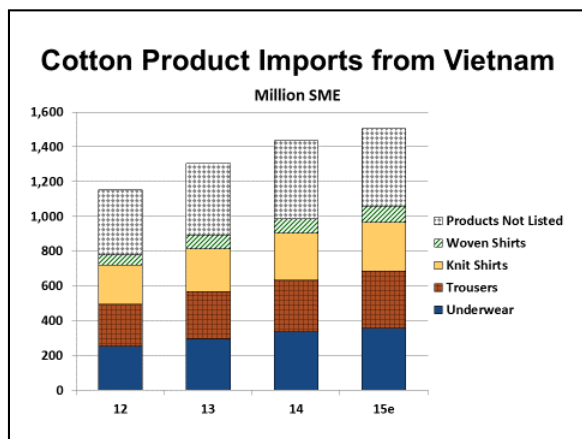


Figure 81 - Cotton Product Imports from Vietnam

### South Korea

Based on SMEs, the largest category of cotton goods imported from South Korea in 2015 was combed cotton yarn, which accounted for 39.5% (Figure 82). The second largest category in 2015 was cotton sheeting fabric (30.6%), cotton hosiery (16.5%) and cotton gloves and mittens (2.0%).

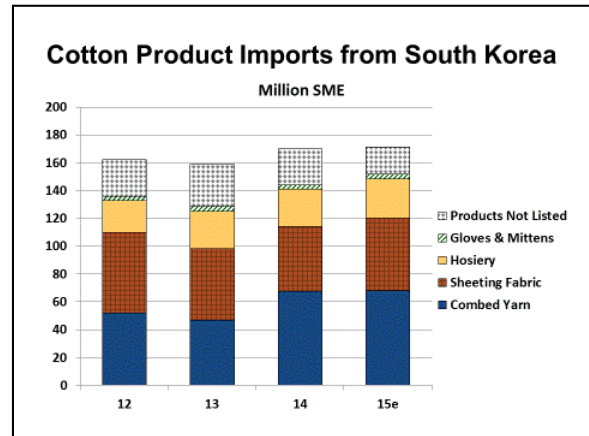


Figure 82 - Cotton Product Imports from South Korea

### Turkey

Based on SMEs, the largest category of cotton goods imported from Turkey in 2015 was cotton sheets, which accounted for 25.7% (Figure 83). The second largest category in 2015 was “other cotton manufactures” (21.3%), followed by terry towels (6.6%) and cotton trousers (6.5%).

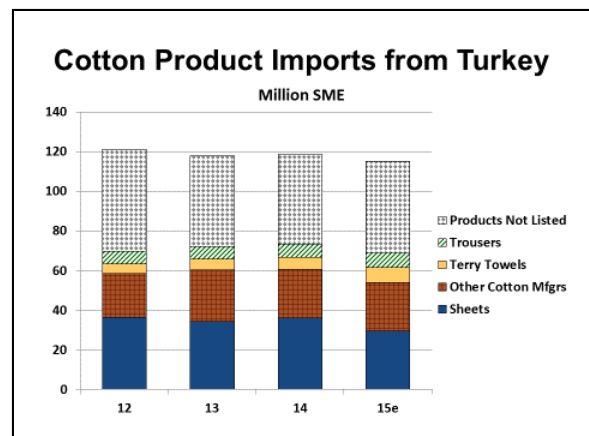


Figure 83 - Cotton Product Imports from Turkey

### U.S. Cotton Product Exports

Exports of U.S. cotton textile and apparel products increased in 2015 (Figure 84) by 4.6% to an estimated 3.8 million bale equivalents. This increase was due to an increase in exports of cotton apparel and cotton yarn, thread and fabric (Figure 85). Exports of cotton yarn, thread, and fabric increased by 5.0% to 3.4 million bale equivalents. Exports of cotton apparel increased by 2.5% in 2015 to 288 thousand bale equivalents. Exports of home furnishings (including floor coverings) declined by 1.1% over the previous year to an estimated 113 thousand bale equivalents. For 2016, NCC projects U.S. cotton textile exports to increase 77 thousand bales to 3.91 million bale equivalents.

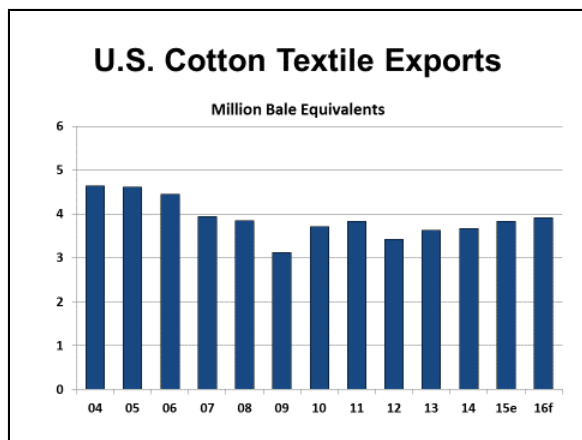


Figure 84 - U.S. Cotton Textile Exports

The top customers of exported U.S. cotton textiles and apparel in 2015 were once again the NAFTA and CBI countries (Figure 86). Exports to the NAFTA countries last year totaled an estimated 915 thousand bale equivalents, down 3.1% from the previous year.

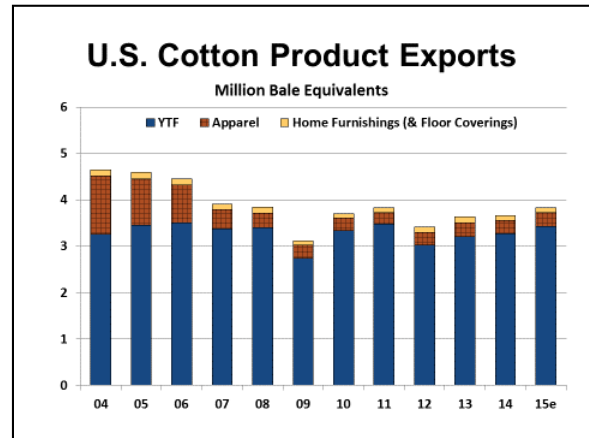


Figure 85- U.S. Cotton Product Exports

Exports to the region accounted for 23.9% of all U.S. cotton product exports. Exports to Mexico decreased to an estimated 660 thousand bale equivalents from 687 thousand in 2014. Cotton product exports to Canada declined by an estimated 1.0% to 254 thousand bale equivalents for 2015.

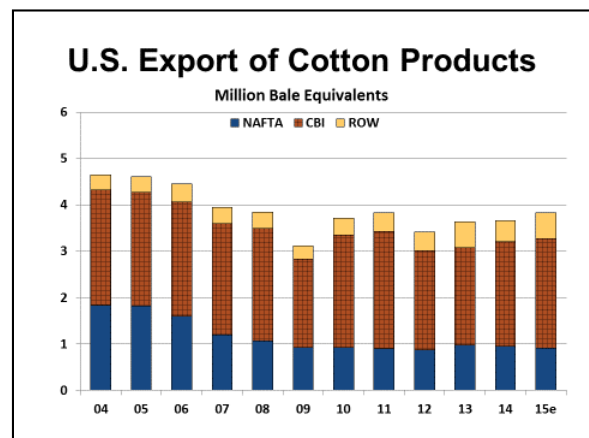


Figure 86 - U.S. Exports of Cotton Products

U.S. exports to the CBI countries grew last year. In 2015, exports increased 3.7%, totaling 2.4 million bale equivalents or 61.3% of all U.S. cotton exports. Approximately 98.2% of the cotton products exported to CBI went to the CAFTA-DR countries

## World Market Situation

World cotton prices, as measured by Cotlook Ltd.'s "A" Index, ranged between 65.3 and 74.8 cents per pound during the course of calendar 2015 (Figure 87). For the current marketing year-to-date, the "A" Index has averaged 69.7 cents per pound, 0.7 cents lower than this time last year.



Figure 87 - "A" (FE) Index

### World

The 2015 marketing year saw a decline in cotton production with an estimated world crop of 101.6 million bales (Figure 88). India and China remain the leading producers while Pakistan and Brazil continue to be significant producers. The United States produced a crop of 12.9 million bales, 3.4 million bales lower than the 2014 crop.

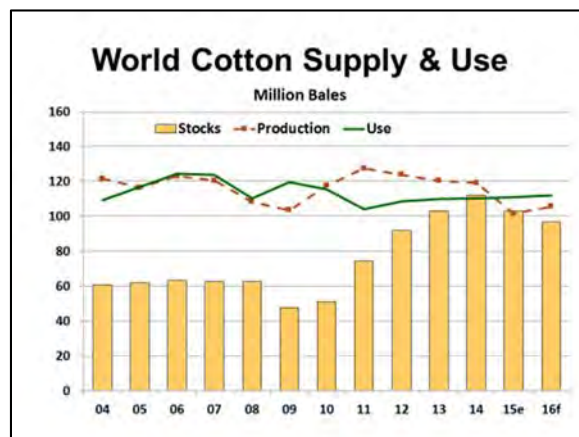


Figure 88 - World Cotton Supply & Use

World production bounced back above mill use in 2010 and 2011. This trend continued uninterrupted through the 2014 marketing year. However, the latest USDA estimates show 2015 production at 101.6 million bales, 9.4 million bales lower than current mill use estimates. World consumption is estimated at 110.4 million bales for the 2014 marketing year and 110.9 million bales for 2015.

Production is projected to climb in the 2016 marketing year to 105.4 million bales with an increase in consumption to 112.1 million bales. Ending stocks will fall to 96.6 million bales resulting in a stock-to-use ratio of 86.2%.

### China

China remained one of the largest cotton producers with a 2015 crop of 23.8 million bales (Figure 89). However, the crop was 6.2 million bales less than the 2014 crop due in large part to fewer harvested acres in 2015.

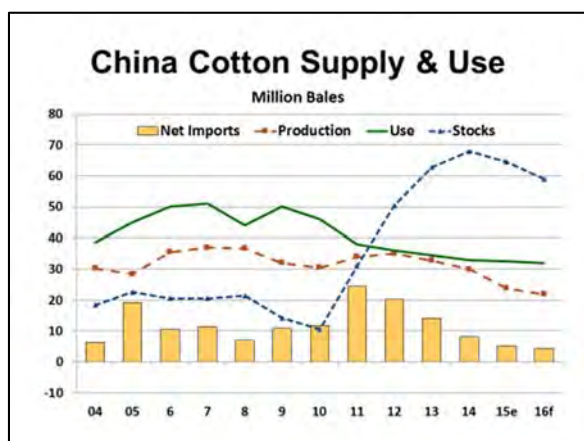


Figure 89 - China Cotton Supply & Use

China’s cotton production for the 2015 crop year dropped as a result of a 23.0% fall in harvested area. The decline in cotton area was in response to the government’s support policy change which lowered subsidies to farmers in the Yangtze River and the Yellow River regions.

Xinjiang will be the country’s major cotton production base. Given the structure of the policies, acreage decisions in Xinjiang must be evaluated separately from the decisions in the eastern provinces. In recent years, the trend in Xinjiang cotton area stands in stark contrast to the other provinces. In the coming years, Xinjiang is likely to supply 80.0% of the domestic cotton production while cotton planting in the Yellow and Yangtze River regions is expected to shrink dramatically. The government’s minimum price cotton purchase policy in the recent past achieved high yields at the expense of quality, in particular lower fiber length and micronaire value. In the coming years, the textile industry will have to use the state cotton reserves which have already experienced an overall decline in quality. In addition, adopting new agronomic practices, and developing varieties suitable for machine harvest will remain challenges for the future of China's cotton production. A 2016 crop of 21.9 million is projected, down 1.9 million bales from 2015.

Along with being a leading cotton producer, China is the largest consumer of raw cotton. The textile industry in China is considered an economic pillar industry. In early 2015, China’s State Council published a “Guidance on Promotion of Xinjiang’s Employment through the Development of the Textile and Apparel Industry”. The Guidance set up a target for expanding spinning capacity to 12 million spindles between 2015 and 2017 (from the estimated 7 million spindles in 2014), and utilization of 20.0% of Xinjiang cotton production. The total spinning capacity is expected to grow to 18 million spindles by 2020 consuming about 26.0% of Xinjiang cotton. The Guidance also plans to increase Xinjiang’s apparel producing capacity to 500 million pieces per year by 2020. The textile and apparel producing chain is expected to create 500,000 to 600,000 jobs for Xinjiang.

However, the textile industry faces significant challenges. China’s high cotton price has significantly reduced its spinning competitiveness and has added costs to its textile and apparel production intended for export. In response, some Chinese spindles have moved to Southeast Asian countries. Similarly, favorable prospects for the Trans-Pacific Partnership (TPP) appear to also be encouraging Chinese spindles to move operations to neighboring countries. For instance, Chinese-invested spindles in Vietnam were estimated at about 2.0 million in 2014.

Between 2009 and 2013, China’s mill use fell by almost 16 million bales as high cotton prices relative to manmade fibers forced spinners to turn away from cotton. In the current marketing year, the current low price for crude oil will continue to support the use of polyester fiber in yarn production and restrict growth in the use of cotton. As a result, a slight decline in cotton mill use is expected during the current marketing year,

and the outlook takes a conservative view for 2016 as well.

Based on a tight import quota, together with an estimated weak recovery in cotton use, cotton imports for 2015 are forecast to plummet to 5.5 million bales. This forecast is significantly lower than the previous two crop years. Industry observers indicate that in the near future, the government is unlikely to add any sort of import quota and imports of cotton yarn are expected to remain strong, in order to satisfy China's yarn use. The current devaluation of Chinese currency is expected to cast a shadow on imports in general but its impact on cotton and yarn imports remains difficult to quantify at this time.

Considering the massive stockpiles of cotton, China's imports are expected to fall further in 2016. Total imports are projected at 4.8 million bales.

The adjustments in China's supply and demand will result in a reduction in stocks, down 5.6 million bales to 58.9 million. The stocks remain a burden on the 2016 cotton market. Unfortunately, government policies, and their impacts on China's prices, are not allowing either cotton production or demand to adjust to a market-driven level, and imports are reduced as a result.

## India

The latest estimates have India producing 28.0 million bales for the 2015 marketing year (Figure 90). If these estimates hold, the 2015 crop will be 1.5 million bales lower than the 2014 crop.

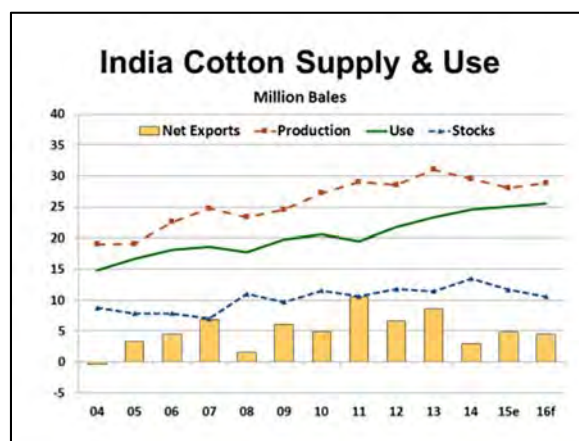


Figure 90 - India Cotton Supply & Use

Cotton production has been a major success story in Indian agriculture as production more than doubled from 10.6 million bales in the 2002 marketing year to a then record 24.7 million bales in 2007. Since 2007, cotton production in India has averaged over 27.0 million bales per year.

India accounts for about a third of global cotton area. Within India, two-thirds of cotton is produced in the central cotton growing zone in the states of Maharashtra, Madhya Pradesh, Gujarat and Odisha where much of the crop is rain fed. The northern zone, which consist 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 pickings or harvests. While the number of pickings has declined as traditional varieties have been replaced by biotech hybrids, farmers can still extract 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 rotation.

The production growth in recent years has been largely fueled by rapid gains in



productivity. Cotton yields have gone from 269 pounds per acre in 2002 to 515 pounds per acre in 2013. The rapid growth in yields can be attributed to the introduction and expansion of Bt cotton and improved hybrid cotton varieties, improved crop management practices and overall favorable weather conditions.

Farmers have shown a consistently strong preference for cotton relative to other crops in recent years. Planting decisions are largely driven by price realization, but additional factors such as the relative cost of production of competing crops, water availability, central/state government support (including anticipated minimum support prices (MSP) and a timely monsoon are crucial factors.

The textile sector is in relatively good condition compared to a few years ago. The textile and clothing industry is largely cotton-based; accounting for 14.0% of total industrial production, 17.0% of total export earnings, 4.0% of GDP and provides direct employment to over 35 million people and indirect employment to an additional 55 million people. After agriculture, the textile industry is India's largest employer. The "organized" or modern textile sector is dominated by spinning units which, in terms of numbers, account for 80.0% of the "units" in the modern industry. Domestic demand is primarily supported by the higher consumption of readymade garments and home textiles due to rising income levels, a growing organized retail segment, and a rising consumer class.

India's textile industry would likely benefit from increased value addition in terms of weaving and garment manufacturing, but the industry continues to focus much of its effort on expansion of the spinning sector. The Indian textile industry includes both an "organized" sector (large-scale spinning units and composite mills) and an

"unorganized" sector (small-scale spinning units, power looms, handlooms, hosiery units). More than 95.0% of yarn is produced in the organized sector. The weaving industry is mainly characterized by the unorganized sector, with power looms accounting for 59.0%, hosiery units for 26.0% and handlooms for 11% of total cloth production. The organized sector weaving mills account for the remaining 4.0% of cloth production. India's mill use should grow to 25.5 million bales in the 2016 marketing year.

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, again being a regional supplier to Pakistan and Bangladesh along with Southeast Asian markets like Vietnam and Indonesia. However, China being the biggest buyer in recent years will likely be the key determiner of India's volumes. Trade indicates that Chinese demand for imported cotton will be restricted to machine picked cotton. For the 2016 marketing year, India is expected to export 5.4 million bales.

## **Uzbekistan**

Current estimates put Uzbek cotton production at 3.7 million bales for 2015 (Figure 91), down 200,000 bales from the previous year. 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 plantation area, production targets, prices, inputs, procurement and marketing. As in the past few years, farmers were expected to plant early-ripening cotton varieties on more than 50.0% of targeted planting area. These varieties are characterized by their early-

ripening feature, better yields, and resistance to various common diseases.

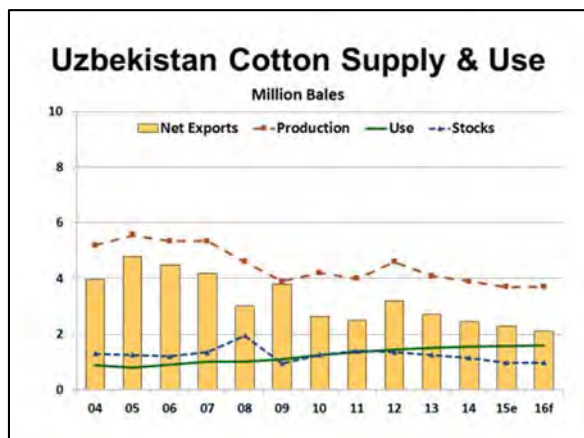


Figure 91 - Uzbekistan Cotton Supply & Use

For the 2016 marketing year, Uzbek cotton production will remain relatively unchanged with an estimate of 3.7 million bales.

In terms of Uzbekistan’s domestic lint consumption, the government has often stated that it would like Uzbekistan to process more of its cotton domestically. According to the government of Uzbekistan’s special program on development and modernization of local textile industry in 2015-2020, the state plans to increase the total domestic consumption to 70.0% by 2020. Currently, 36.0 to 37.0% of all cotton is consumed domestically. The spinning and weaving industries continue to invest in new equipment as well as renovations of existing equipment due to improving profitability over the past 6-7 years. Domestic demand has been increasing marginally over the past years, and so did export demand, especially for cotton yarn and textile garments.

As a result, Uzbek domestic cotton consumption is estimated at 1.6 million bales in the 2015 marketing year. For 2016, Uzbekistan’s mill use is projected to remain unchanged at 1.6 million bales.

Currently, Uzbekistan has a well-established local system of logistics, consisting of 21 specialized cotton terminals with a storage capacity of 410,000 tons, and a good transportation infrastructure and shipment corridors that facilitate timely deliveries of Uzbek cotton to buyers. With that type of infrastructure, Uzbekistan will remain a net exporter of cotton for the foreseeable future, exporting an estimated 2.1 million bales of cotton in the 2016 marketing year.

## Pakistan

Cotton is Pakistan’s main industrial crop and is planted on 15.0% of arable land during the “Kharif” or monsoon season from May to August. There is a small spring crop from February to April. Production is concentrated in two provinces with Punjab accounting for nearly 75.0% and Sindh nearly 25.0% of area. For the most part, cotton is produced by small farmers cultivating less than five hectares of land. An estimated 1.6 million farmers grow cotton.

In 2015, cotton production was estimated at 7.2 million bales. An increase in production is expected for the upcoming marketing year as a result of higher yields and increased harvested acres. Assuming normal weather conditions and low pest infestation, production is projected to be 9.2 million bales in 2016 (Figure 92).

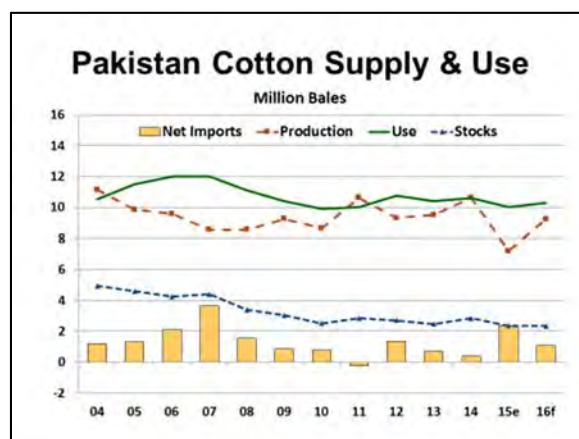


Figure 92 - Pakistan Cotton Supply & Use



The textile sector continues to benefit from the European Union’s (EU) late 2013 decision to grant Generalized System of Preferences “Plus” status to Pakistan. The status provides tariff and quota-free access to Pakistani products entering the EU and textile exports have benefitted significantly, resulting in an expected increase in consumption. Maintaining a consistent energy supply is a persistent concern for the industrial sector, but the government has taken steps of late to prioritize energy supplies for industries like the textile sector, a step that bodes well for cotton consumption. Pakistan’s mill consumption is projected to grow to 10.3 million bales for the 2016 marketing year.

Pakistan is a net importer of cotton, primarily because of strong demand for better grades of cotton for blending and for 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 as high end textiles.

These practices should keep Pakistan a net cotton importer in 2016. Net cotton imports for the 2016 marketing year are expected to be 1.1 million bales.

## Turkey

Production fell to 2.7 million bales in 2015 (Figure 93). For 2016, production is projected to rise to an estimated 2.8 million bales.

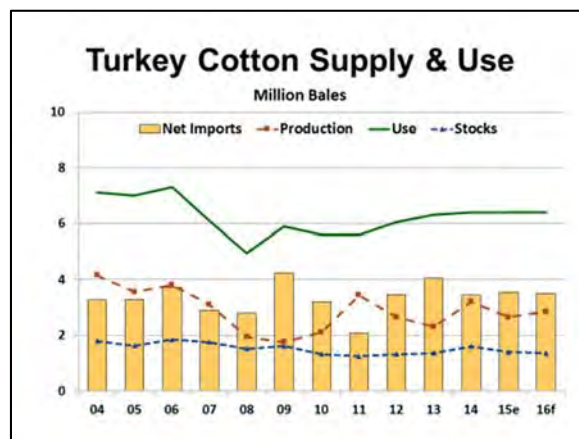


Figure 93 - Turkey Cotton Supply & Use

Turkey, the second largest export market for U.S. cotton is also being impacted by government actions. In this case, the action is a self-initiated antidumping (AD) investigation of imports of U.S. cotton launched by Turkey in October 2014. The investigation has caused concern in the market and U.S. cotton orders have slowed down as importers are worried about a possible import duty. The local textile industry met the investigation with anger, pointing out that domestic production can only meet less than half of the sector’s needs, and that the U.S. supplies about half of the required imports. The Turkish textile industry is continuing to fight against the possible anti-dumping duty, claiming that such a move will make Turkish textile exports more expensive and may cause Turkish products to lose market share in international markets.

The textile industry is one of the crucial industries in Turkey, providing about 17.0% of total exports and about 2.5 million jobs. A review of publicly available price data indicates no evidence of dumping, and public statements by Turkey’s Minister of Economy suggest that the investigation is being conducted in retaliation of U.S. investigations of imported steel products from Turkey.

For this economic outlook, NCC assumes that the investigation results in no duty applied to imports of U.S. cotton. Whether this is a valid assumption will depend on the outcome of the investigation, but this assumption is appropriate for two reasons. First, this assumption is supported by the economic analysis of available data. Second, this assumption allows the outlook to serve as a baseline projection against which alternative duties could be evaluated.

Under these assumptions, Turkey’s mill use is projected to remain stable in 2016. Turkey is projected to have net imports of 3.5 million bales, slightly lower than the 2015 crop year.

### Australia

Current estimates put Australia’s cotton production at 2.4 million bales for the 2015 marketing year (Figure 94). A return to a more normal weather pattern puts Australia’s cotton production at roughly 3.1 million bales in 2016.

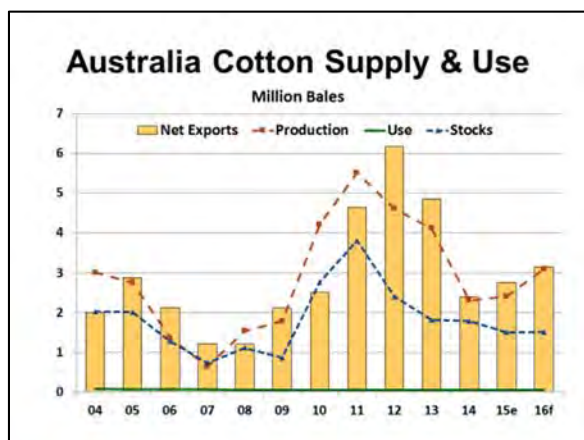


Figure 94- Australia Cotton Supply & Use

Australia is one of the world’s largest exporters of raw cotton with over 90.0% of the domestic crop exported, mainly to China, Indonesia and Thailand. For the 2015 marketing year, net exports are estimated to reach 2.8 million bales. With production hovering around the 3.1 million bale mark

during the 2016 marketing year, net exports are expected to climb to 3.1 million bales.

### Brazil

Production cost continue to be a concern for cotton producers in Brazil. The cost of production, especially for seeds, fertilizers, and pesticides, has gone up tremendously as most of them are imported and their prices are based on dollar terms. Between September 2014 and September 2015, the cost for seeds, fertilizers, and pesticides, went up by 10.0%, 37.0%, and 32.0%, respectively. In addition, producers are also facing higher labor prices, as well as higher interest rates for production loans. Current estimates place production for the 2015 marketing year at 6.5 million bales (Figure 95). For the 2016 marketing year, harvested area is estimated at 2.4 million acres, up slightly from the previous year, resulting in a production estimate of 6.8 million bales in 2016.

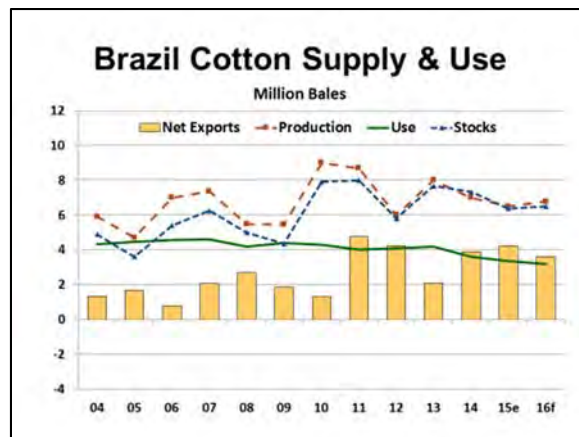


Figure 95 - Brazil Cotton Supply & Use

Brazilian mill use for the 2015 marketing year was down 250,000 bales to 3.4 million bales. Brazilian cotton consumption will be down slightly in the 2016 marketing year with mill use estimated at 3.2 million bales.

In terms of trade, Brazil is expected to reach net exports of 4.3 million bales of cotton in the 2015 marketing year. For the 2016 marketing year, net exports are expected to

fall roughly 650,000 bales to roughly 3.6 million bales.

## West Africa

In the West African cotton-producing countries, cotton production continues to play an important role in the economy. As a result, cotton production in 2015 was an estimated 4.9 million bales.

The late start of the rainy season pushed farmers to either abandon their farms or reduce area planted. Although the rain was well established at the end of July and the beginning of August, West African countries expect to produce 10.0% less seed cotton than their initial target. Burkina Faso remains the top cotton producer in the region, followed by Mali, Cote d'Ivoire, Chad, and Senegal. As some countries are at the end of their harvest season, production may change slightly.

Despite all the obstacles facing cotton producers in these countries, and the remaining 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 4.9 million bales in 2016 (Figure 96), unchanged from 2015.

With this size crop, 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 2015 marketing year, it is estimated that the region will remain net exporters with net exports of 5.2 million bales. For 2016, West African net exports are expected to fall to 4.9 million bales.

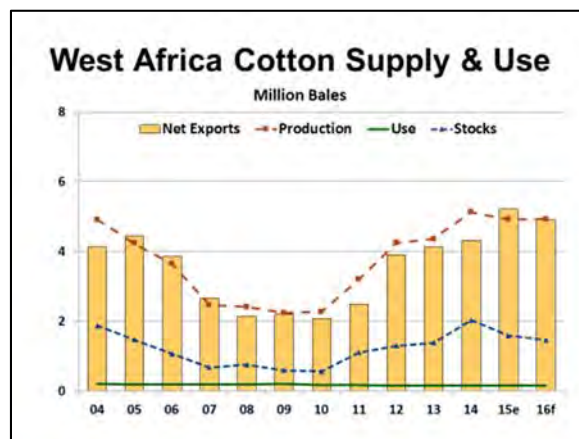


Figure 96 - West Africa Cotton Supply & Use

Longer term, West Africa's potential for growth and stability depends on whether or not they can address a number of internal issues related to their production, ginning, price discovery, and distribution systems.

## Mexico

Mexican cotton production for marketing year 2015 fell 420,000 bales, to just under 1.0 million bales.

With a slight increase in acres estimated for 2016, production increases slightly with an estimated crop of 1.0 million bales in the 2016 marketing year (Figure 97).

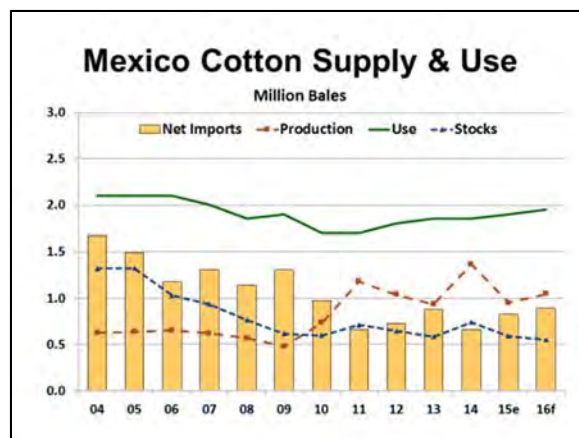


Figure 97 - Mexico Cotton Supply & Use

In terms of consumption, Mexico's outlook remains basically unchanged. Marketing year 2015 mill use is estimated at 1.9 million bales. For the 2016 marketing year,

Mexican mill consumption is projected to remain stable at just under 2.0 million bales.

Cotton imports grew slightly to about 1.0 million bales during the 2015 marketing year. The U.S. should continue to be the main supplier, accounting for practically 100.0% of Mexico's cotton imports. Mexico's net imports are expected to increase to roughly 890,000 bales for the 2016 marketing year.

## Indonesia

Indonesian cotton production was estimated to reach 5,000 bales in the 2015 marketing year (Figure 98). Current projections show this number down to 4,500 bales for 2016.

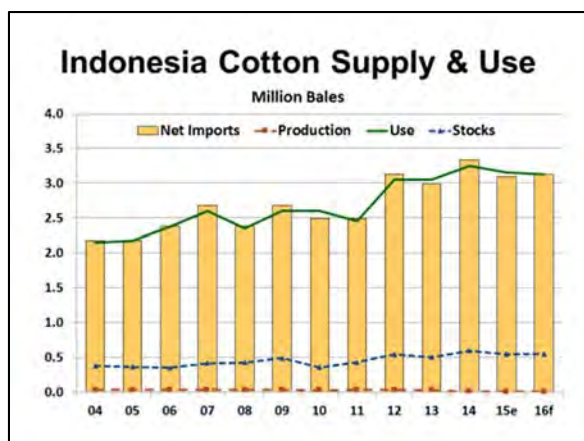


Figure 98 - Indonesia Cotton Supply & Use

The Indonesian spinning sector produces spun yarn and sewing thread. The sector is expanding, having grown from 251 companies in CY 2012 to 260 companies in CY 2013, with total install capacity growing from 3.1 million metric tons (MMT) of yarn to 3.5 MMT. In CY 2013, Indonesian spinning mills ran at 86.2% capacity, with a total of 10.97 million spindles and 179,385 rotors, compared to 10.21 million spindles and 175,513 rotors in CY 2012. In 2013, industry sources reported that the Indonesian spinning industry consumed a total of 2.6 MMT of fiber as raw material annually, consisting of cotton (26.0%), man-made

fiber (73.0%), and others (1.1%). Indonesia exports approximately 30% of its yarn production. A gradual increase in electricity tariffs since May 2014 has increased synthetic fiber production costs, pushing up synthetic yarn and thread prices. Simultaneously, Chinese cotton production policy changes and higher international cotton supplies have helped drive cotton prices down, while cotton yarn prices remain high relative to synthetic yarn. As a result of these factors, Indonesian spinners have switched from synthetic fibers to cotton. Japan, Belgium, Italy, and the United States are Indonesia's major export destinations for cotton fabric.

Indonesian cotton consumption in marketing year 2016 is estimated to remain relatively unchanged at 3.1 million bales. The same holds true for net imports, estimated at just over 3.1 million bales for the 2016 marketing year.

## Vietnam

Cotton production in Vietnam is highly susceptible to weather conditions and can fluctuate widely year-to-year. More than 90.0% of the cotton production area in Vietnam is rain-fed, with planting initiated in the rainy season (May/June – August) and harvesting taking place from October - December. In areas where irrigation is possible, cotton may be planted in the dry season (November/December), thereby allowing for harvesting from March through May. For the 2015 marketing year, production stands at 3,000 bales with no change expected for the 2016 crop (Figure 99).



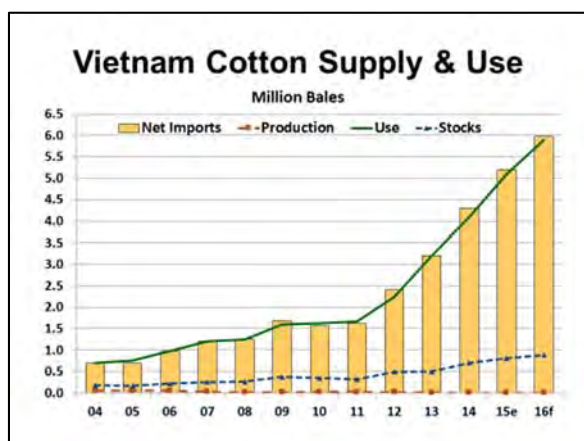


Figure 99 - Vietnam Cotton Supply & Use

Vietnam’s domestic cotton consumption continues to increase in order to meet strong demand from its expanding textile industry. Demand for yarns is strong, both from export and domestic markets. Vietnam is currently home to over 100 spinning mills with 6.1 million spindles (equivalent) for a total capacity of 828,000 tons of cotton-based and man-made yarns. Vietnam’s cotton consumption has been increasing for the last five years.

Estimates place 2015 marketing year mill use at 5.1 million bales. Growth continues into the 2016 marketing year with consumption climbing to 5.9 million bales.

In order to keep pace with this rising cotton demand, Vietnam will remain a net importer for the foreseeable future, with the U.S. being a significant supplier. For the 2015 marketing year, Vietnam’s net imports are estimated to be 5.2 million bales and estimates are higher for the 2016 marketing year at 6.0 million bales.

## Bangladesh

Marketing year 2015 cotton production in Bangladesh totaled 125,000 bales (Figure 100). Cotton production is vulnerable to excessive rainfalls/floods and pest infestations which are common in Bangladesh. With that in mind, production

for the 2016 marketing year is expected to climb to 131,000 bales.

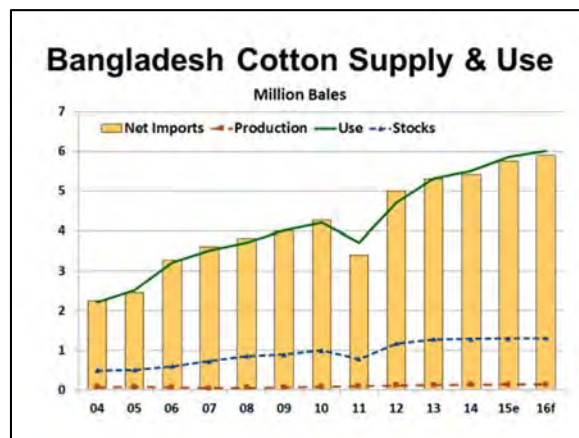


Figure 100 - Bangladesh Cotton Supply & Use

In terms of consumption, marketing year 2015 mill use was estimated at 5.9 million bales and an increase is expected in the 2016 marketing year with an estimate of 6.0 million bales.

As a result of increasing demand, raw cotton imports have steadily grown. Imports have increased to an estimated 5.8 million bales for the 2015 marketing year and are projected to increase slightly in 2016 to roughly 5.9 million.

## United States Trade

For the 2015 marketing year, U.S. exports of raw cotton are estimated to be under 10.0 million bales (Figure 101), down from 2014. Exports climb in the 2016 marketing year with projections of 10.2 million bales. The reliance of the U.S. cotton market on exports has increased dramatically over the past 15 years as the domestic textile industry has contracted. It is estimated that exports will constitute almost 75.0% of total use for the 2015 marketing year.

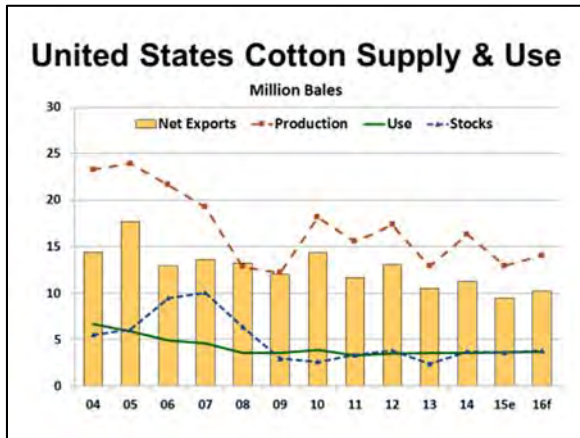


Figure 101 - United States Cotton Supply & Use

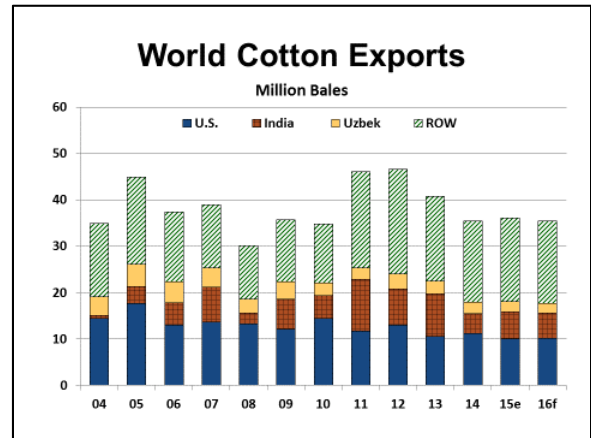


Figure 103 - World Cotton Exports

Customers of U.S. exports have changed in recent years. While Mexico remains one of the top customers, along with Turkey, Vietnam, and Indonesia; China has dropped out of the top five U.S. export destinations (Figure 102).

Pakistan has the greatest drop in imports with an estimated 1.5 million bales, down 1.2 million bales from 2015, followed closely by China with an estimated 4.8 million bales, 750,000 bales fewer than the previous year (Figure 104).

2010		2015YTD	
Country	(000 480-Lb. Bales)	Country	(000 480-Lb. Bales)
China	4,860	Mexico	979
Turkey	2,076	Turkey	888
Mexico	1,244	Vietnam	863
Indonesia	889	Indonesia	416
Vietnam	717	Korean Republic	360
Thailand	712	Thailand	358

Figure 102 - Top U.S. Raw Cotton Export Destinations

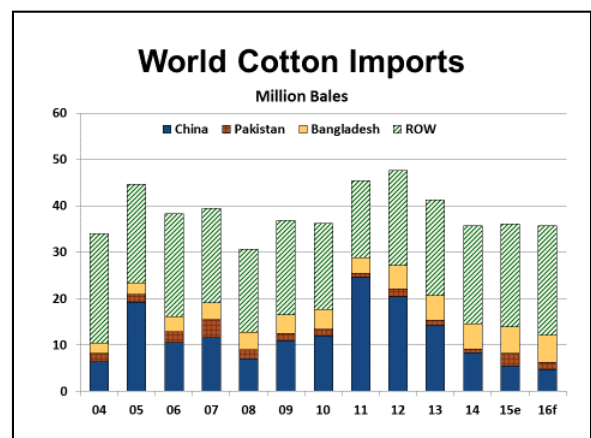


Figure 104 - World Cotton Imports

## World Trade

In the 2015 marketing year, world cotton trade climbed to roughly 36.1 million bales (Figure 103). Current estimates put 2016 marketing year world cotton trade at 35.8 million bales. As previously discussed, U.S. exports are projected to climb to 10.2 million bales in the 2016 marketing year.

Examining the world trade-to-mill use ratio for the 2015 marketing year shows a slight increase to 32.5% from 32.4% in 2014 (Figure 105). For 2016 the ratio is expected to fall back below 32.0%.

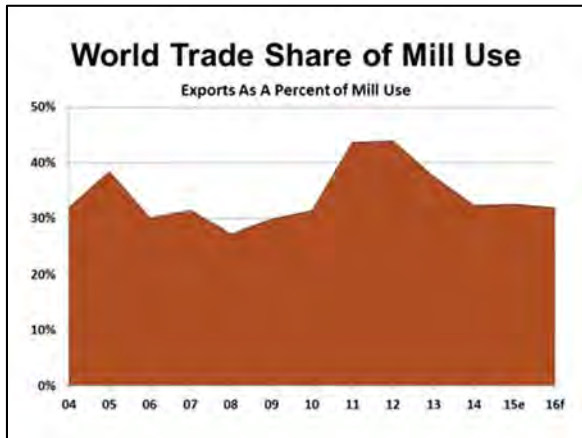


Figure 105 - World Trade Share of Mill Use

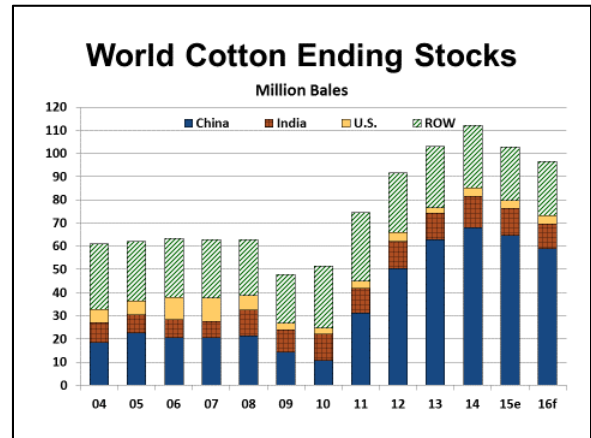


Figure 106 - World Cotton Ending Stocks

### World Ending Stocks

For the 2016 marketing year, ending stocks are estimated to fall to 96.6 million bales while the stocks-to-use ratio is estimated at 86.2% (Figure 106). The two largest producers – China and India – will continue to be significant holders of cotton stocks due in part to various government programs.

The overall balance sheet would indicate continued pressure on prices as the projected world stocks-to-use ratio falls to 86.2% for the 2016 marketing year (Figure 107).

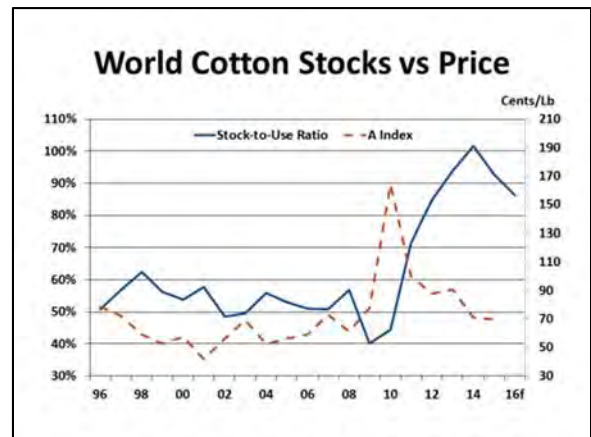


Figure 107 - World Cotton Stocks vs Price