INFORMATION NOTE. MAY 2013.

Cotton: Trends in Global Production, Trade and Policy

ICTSD Programme on Agriculture Trade and Sustainable Development

1. Introduction[1]

After years of negotiations and even a framework resolution to a pivotal trade dispute, cotton still remains a critical concern for countries at the World Trade Organization. However, historically high prices, and evolving trade patterns may change the role of price depressing subsidies provided by developed countries in discussions on the fiber. New legislation in the United States is anticipated to address the WTO dispute with Brazil and is likely to be the single most important policy change to affect the commodity in the near term.[2] This note, in collaboration with the International Cotton Advisory Committee, aims to summarize recent ICTSD research on proposed changes in US policy while offering recommendations based on changes in global production and trade.

2. Cotton Production and Trade

With cotton prices above historical averages in recent years, trade and production has evolved substantially. Developing countries now play an increasingly greater role in the production, movement and processing of cotton into a finished product. In 2012/13, developing countries[3] will account for most of global cotton mill use (96 percent), imports (97 percent), and production (81 percent), but they only account for 52 percent of global cotton exports. Developing countries compete with developed countries such as the United States, Australia and Greece for export markets. Developing countries themselves are not a homogeneous group, with economically powerful China, India, Brazil and Turkey playing a greater role in the market than most LDCs (Least Developed Countries) — African cotton producers and a few Asian cotton consuming countries. In sum, the smaller economies represent only 5 percent of global cotton production, 11 percent of exports, 5 percent of mill use and 10 percent of imports.

1 *As a collaboration between ICAC and ICTSD this note was prepared by Armelle Gruere and Ammad Bahalim in the Spring of 2013. Data from ICAC sources is therefore from April 2013. Newer figures may be found at www.icac.org.*

2 *As this note goes to press, the US Senate and House Agriculture Committees have both eliminated a proposal for a minimum price in the STAX programme on cotton. These elements are explained further in the text. Readers should be aware that a point of emphasis in this this note, that a minimum price for cotton in the STAX programme is perhaps its most trade distorting element, has been eliminated from recent Senate and House proposals.*

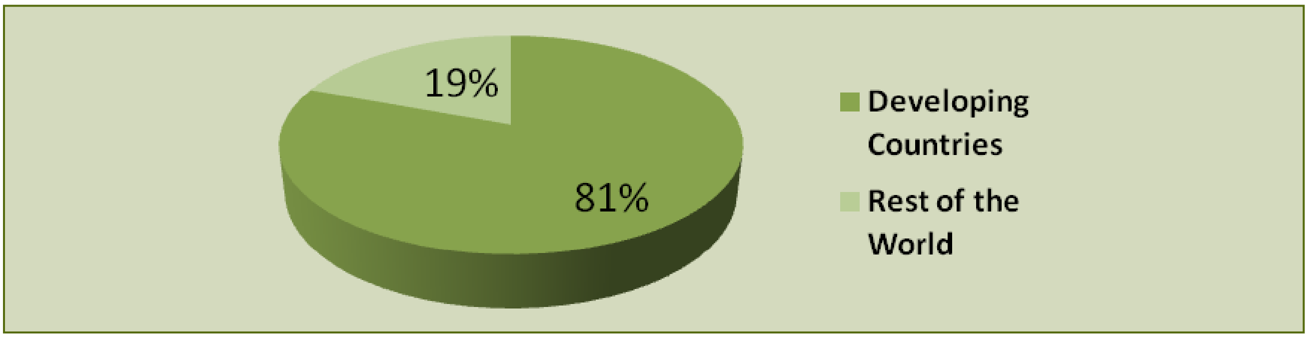
3 *World minus OECD countries, plus Turkey, Mexico and South Korea.*

International Cotton Advisory Committee

ICTSD

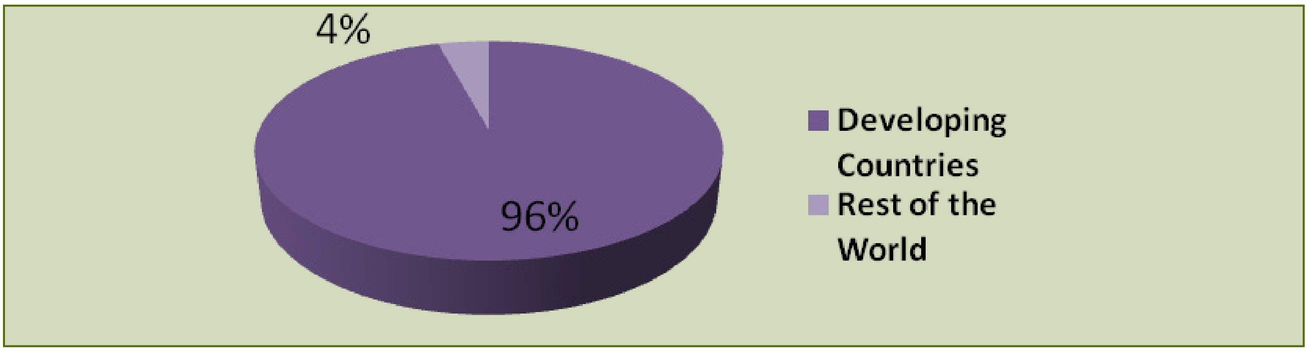
International Centre for Trade and Sustainable Development

Figure 1: Global Cotton Production



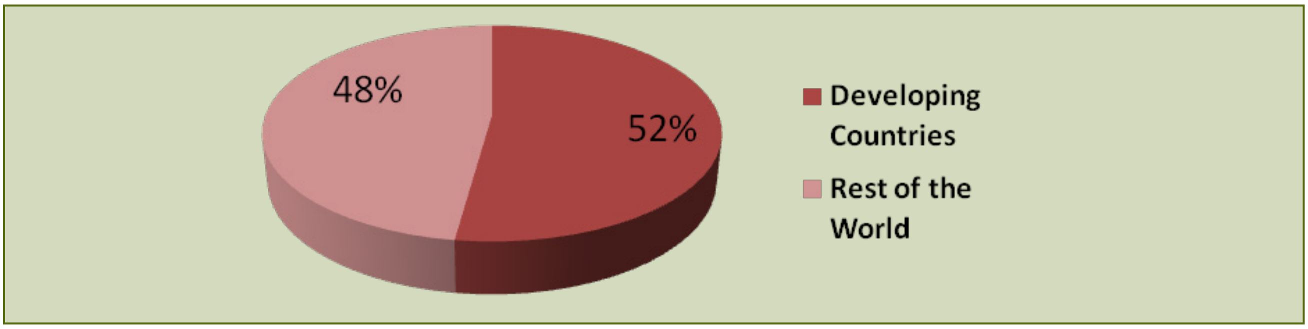
Source: ICAC

Figure 2: Global Cotton Mill Use



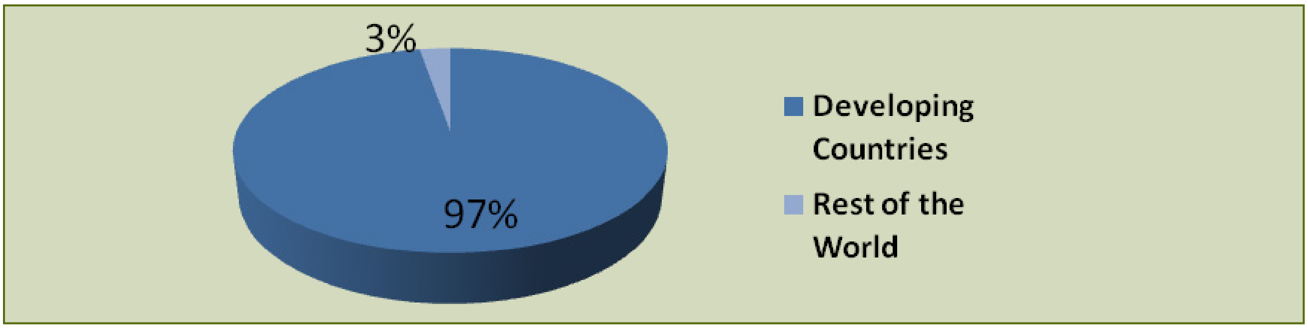
Source: ICAC

Figure 3: Global Cotton Exports



Source: ICAC

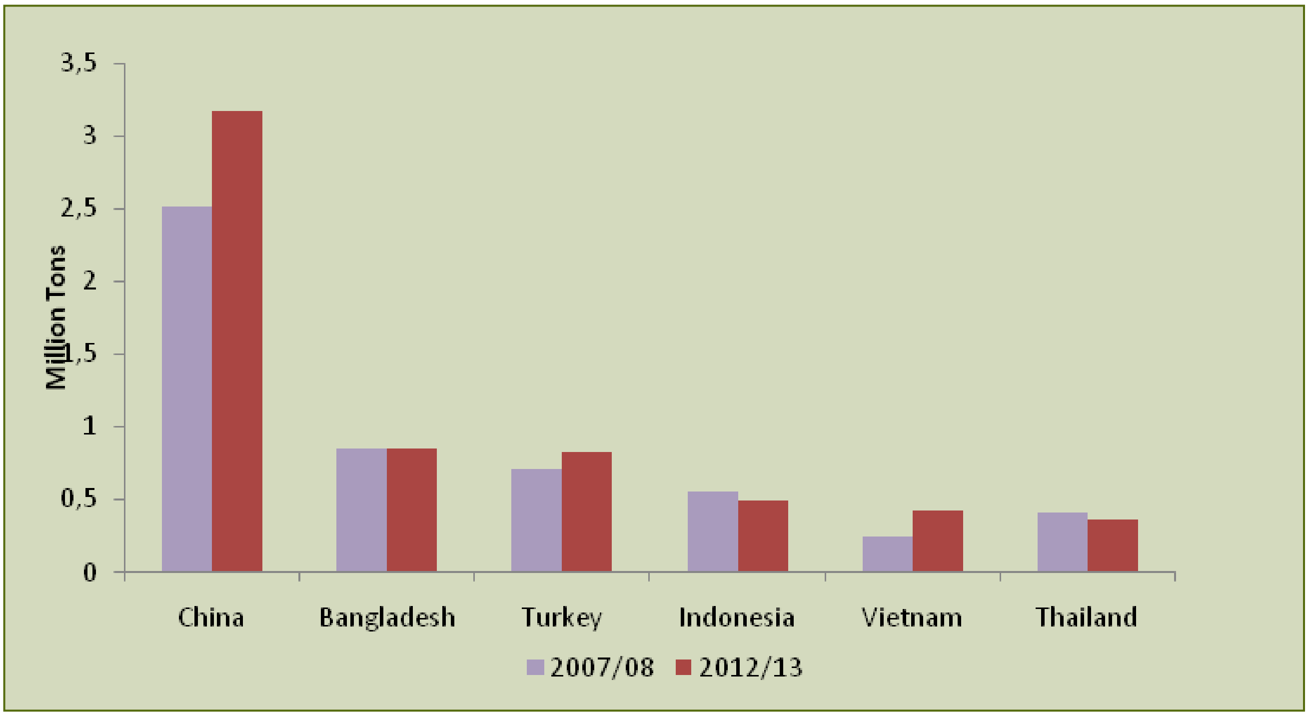
Figure 4: Global Cotton Imports



Source: ICAC

One of the most important developments of the past decade has been China's rise as the largest importer of cotton, accounting for 36 percent of world cotton imports in 2012/13. Still, China's imports could decline over the next few years if the government decides to release some of its large national reserve. Bangladesh, Turkey, Indonesia and Vietnam are the next largest importers, with a combined share of 30 percent expected in 2012/13, up from 28 percent five years ago due to increasing consumption. In contrast, Pakistan's share has declined from 10 percent to 2 percent in 2011/12 due to reduced consumption, but it is rising to 5 percent in 2012/13.

Figure 5: Cotton Imports



Source: ICAC Secretariat

The largest exporter of cotton over the last five years has been the United States, accounting for around a third of global cotton trade. India was the second largest exporter in 2007/08 with 19 percent of global trade, but its share could drop to 10 percent this season as a result of higher domestic mill use. Central Asia's share is also down (16 percent to 10 percent) due to reduced production and increased consumption. The shares of Brazil and the C-4 countries (Benin, Burkina Faso, Chad and Mali) are up (from 6 percent to 11 percent and from 3 percent to 6 percent, respectively), due to larger crops. Australia's share rose from 3 percent to 12 percent, also from increased production. Brazil, India and Uzbekistan export large enough quantities to have a potential impact on global cotton prices. However, the much smaller African countries are price-takers, and are also subject to exchange rate fluctuations.

Over the last decade, the destination of cotton exports has switched from Europe to Asia, and in particular to China. The previous relative advantage of African countries regarding freight time and cost, compared to exporters such as India, Central Asia and Australia, has disappeared. Currently Africa is one of the farthest providers of cotton to Asia. However, intermediate export locations such as Malaysia have recently developed: merchants ship cotton there to better answer short-notice demands from Asian countries.

Despite the fact that cotton importers are mostly developing countries themselves, they remain impartial vis-à-vis their providers: no preference has ever been given to some countries based on their level of economic development. African exporters usually sell all their available supply and therefore, in most cases, little difference would result from being given preference to other exporters. However, China, the largest destination for African cotton, imposes import duties from 5 percent up to 40 percent on cotton imported outside of the annual 894,000 ton-import quota related to WTO obligations. If China were to allow entry of African cotton free of duty, such cotton would therefore gain some competitiveness versus other origins of cotton. The Duty-Free Quota-Free (DFQF) programme presents one such possibility. So far however, Chinese notifications to the WTO in 2011 on its DFQF programme do not include raw cotton in the scheme.[4]

Figure 6: Cotton Exports

3. Cotton policies, globally

In 2011/12, the ICAC Secretariat estimated that ten countries provided subsidies to their cotton industry.[5] The largest provider of subsidies in 2011/12 was not the United States but China.[6] China has been the largest provider of support to its cotton sector since 2009/10, overtaking the United States.[7] With a new minimum support price policy and import quotas, domestic cotton prices in China were maintained well above international cotton prices. Total government support to the Chinese cotton sector was estimated at around USD 3 billion in 2011/12. In comparison, total support provided to the U.S. cotton sector was around USD 820 million through subsidized crop insurance.[8] On the other hand, European producers, in Greece and Spain, receive high support on a per unit basis when compared with other countries. Turkey, Mali, Colombia, Senegal and Cote d'Ivoire round out the top ten in total support provided to cotton farmers.

4 *World Trade Organization (2011). China's Duty-Free Quota-Free Programme for LDC Prodcuts. Committee on Trade and Development. G/C/W/656/Rev.1, WT/COMTD/N/39/Add.1/Rev.1. Geneva, Switzerland.*

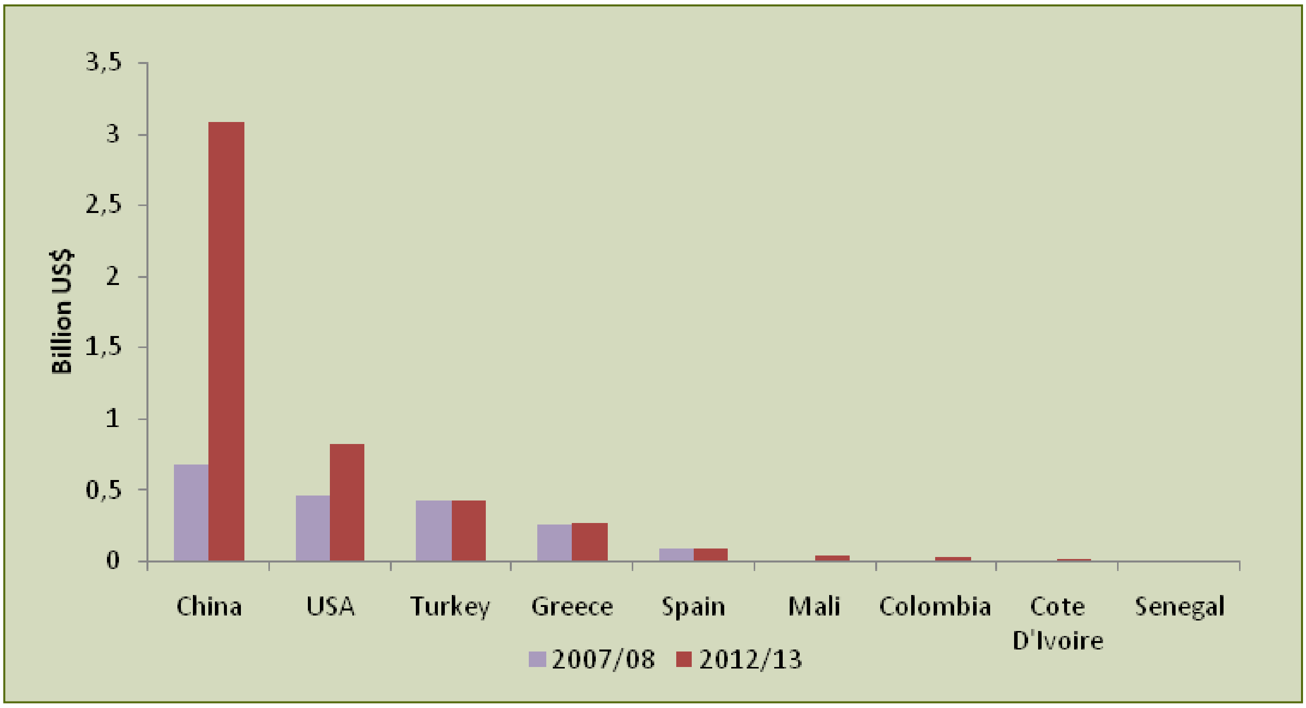
5 *International Cotton Advisory Committee, Government Support to the Cotton Industry, October 2012.*

6 *Total subsidies, not equivalent subsidy per pound of cotton.*

7 *As a result of higher than average cotton prices, U.S. support to its cotton sector dropped significantly that season and has since remained lower than in the past.*

8 *Other countries supporting their cotton sector in 2011/12 include Turkey, Greece, Spain, Colombia and some Francophone African countries (Mali, Cote d'Ivoire and Senegal).*

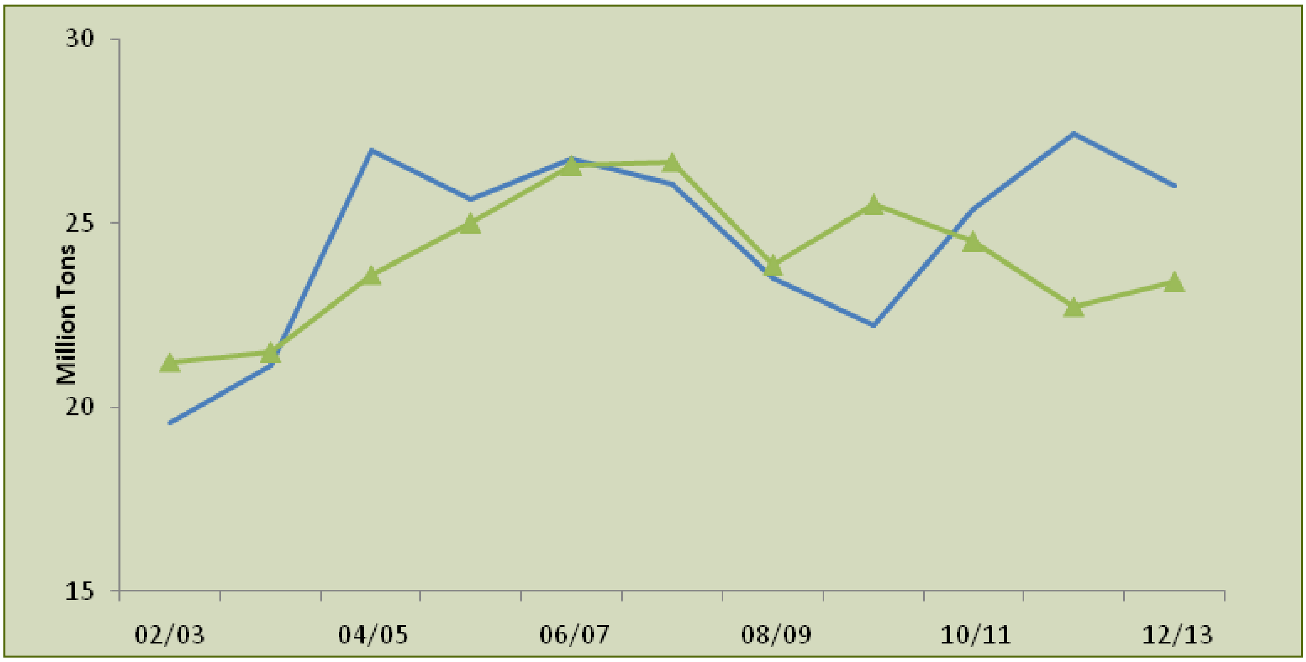
Figure 7: Support to Cotton Production



Source: ICAC Secretariat

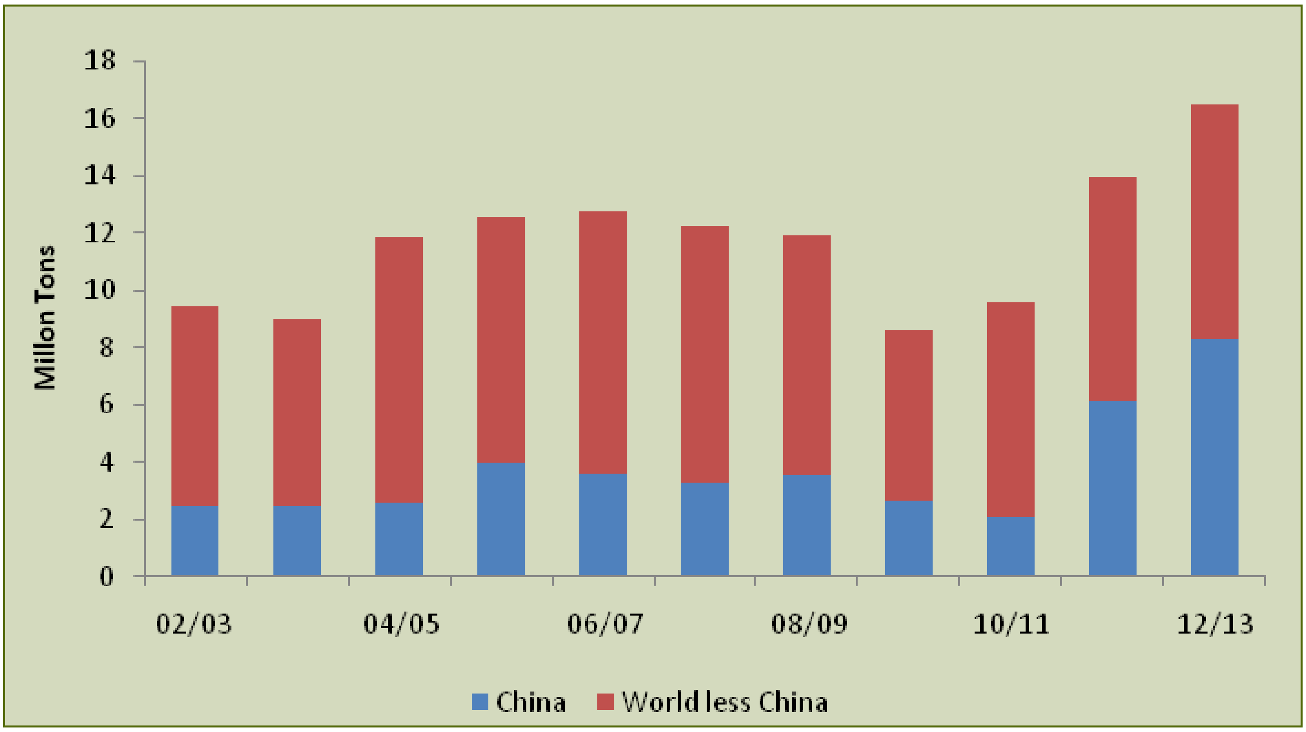
China's dramatic rise as a supporter of cotton, with support increasing more than fivefold between 2007/08 and 2012/13 by the ICAC measure, merits specific examination. Support in most other countries has either remained flat or grown, but not by several fold, in the intervening period. Interestingly, in 2012/13, if it were not for the Chinese government's accumulation of cotton into a very large national reserve, stocks might have accumulated faster in the rest of the world and international cotton prices might have declined further. Global stocks are only expected to decline slightly in 2013/14, while demand for cotton will remain constrained by slow economic growth. With the threat of large Chinese stocks hanging over the global market, the likelihood that international cotton prices will remain depressed over the next two years is high. The Chinese minimum support price, as explained below, is unlikely to ameliorate the situation.

Figure 8: World Production & Mill Use



Source: ICAC Secretariat

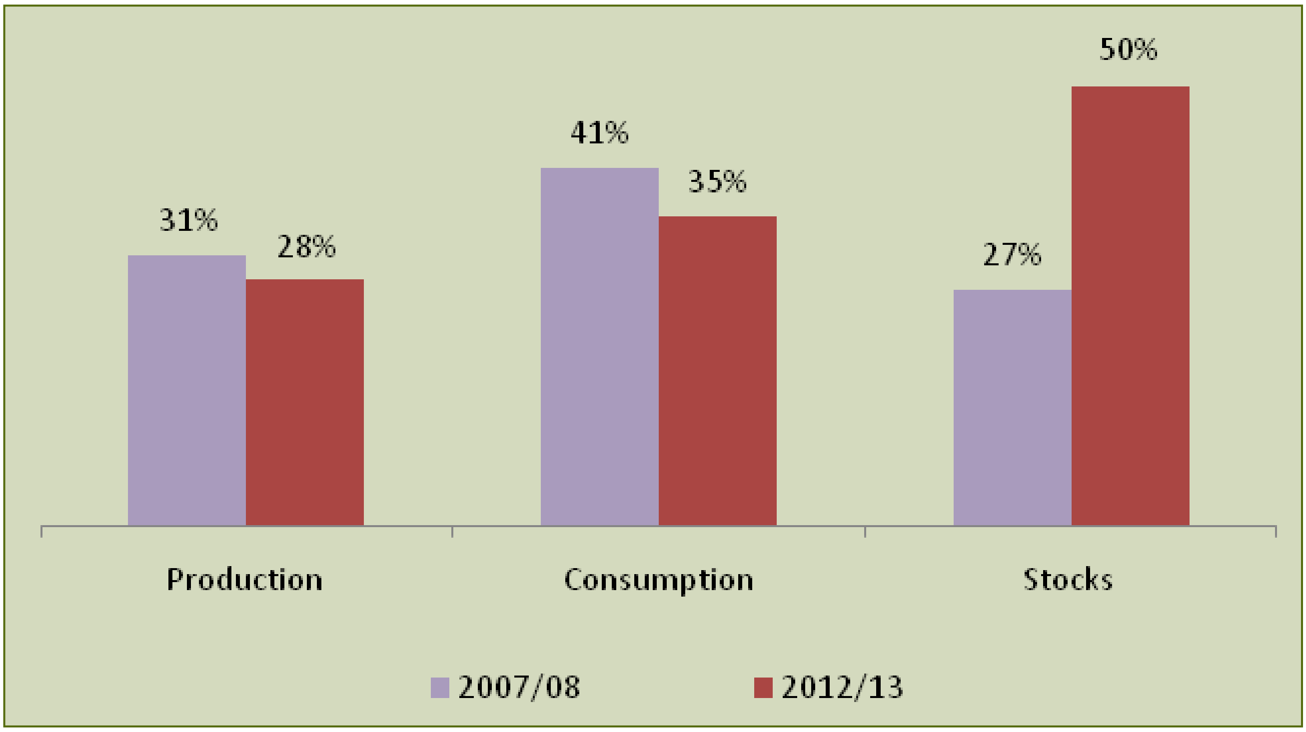
Figure 9: World Ending Stocks



Source: ICAC Secretariat

China's current minimum support price policy has translated into purchases of over nine million tons of cotton from the 2011/12 and 2012/13 domestic crops and over one million tons of foreign cotton, between October 2011 and March 2013. Around 1.5 million tons of reserve stocks were released to the Chinese market between September 2012 and March 2013, and more is expected to be sold between April and July 2013. As a result, by the end of 2012/13, China could hold half of global cotton stocks, vs. only 27 percent five years ago. In contrast, its share of global production and consumption declined over this period. While China's current purchasing policy has been applied for two seasons and price triggers have been made relatively clear to the rest of the world, the rules governing releases of cotton back to the market are not announced much in advance. The Chinese government started auctioning some of its reserve cotton to domestic spinning mills in mid-January 2013, but by over the following month it did not seem that the releases would be large enough to significantly undermine domestic and international prices. However, acceleration in these releases could reduce the need for Chinese imports and depress world cotton prices.

Figure 10: China's Share of World Total



Source: ICAC Secretariat

4. US Cotton Production and Trade in the Global Context

The US is the world's third largest producer of cotton and its largest exporter. Only China and India grow more of the fibre. Over the preceding decade the US has accounted, on average, for a third of world exports, with its share fluctuating between 26 percent in 2011/12 and 44 percent in 2008/09. The United States is also the developed country providing the largest amount of support to its cotton farmers.[9,10] In contrast, most developing countries do not have the resources to provide such help to their cotton growers. Numerous reports have attempted to estimate the impact of U.S. cotton support on international prices. U.S. government support to its cotton farmers was found to depress world cotton prices by a number of studies.[11,12,13] US production and trade in cotton clearly affects others and policy often plays a role in shaping the outcomes.

9 *International Cotton Advisory Committee, Government Support to the Cotton Industry, October 2012.*

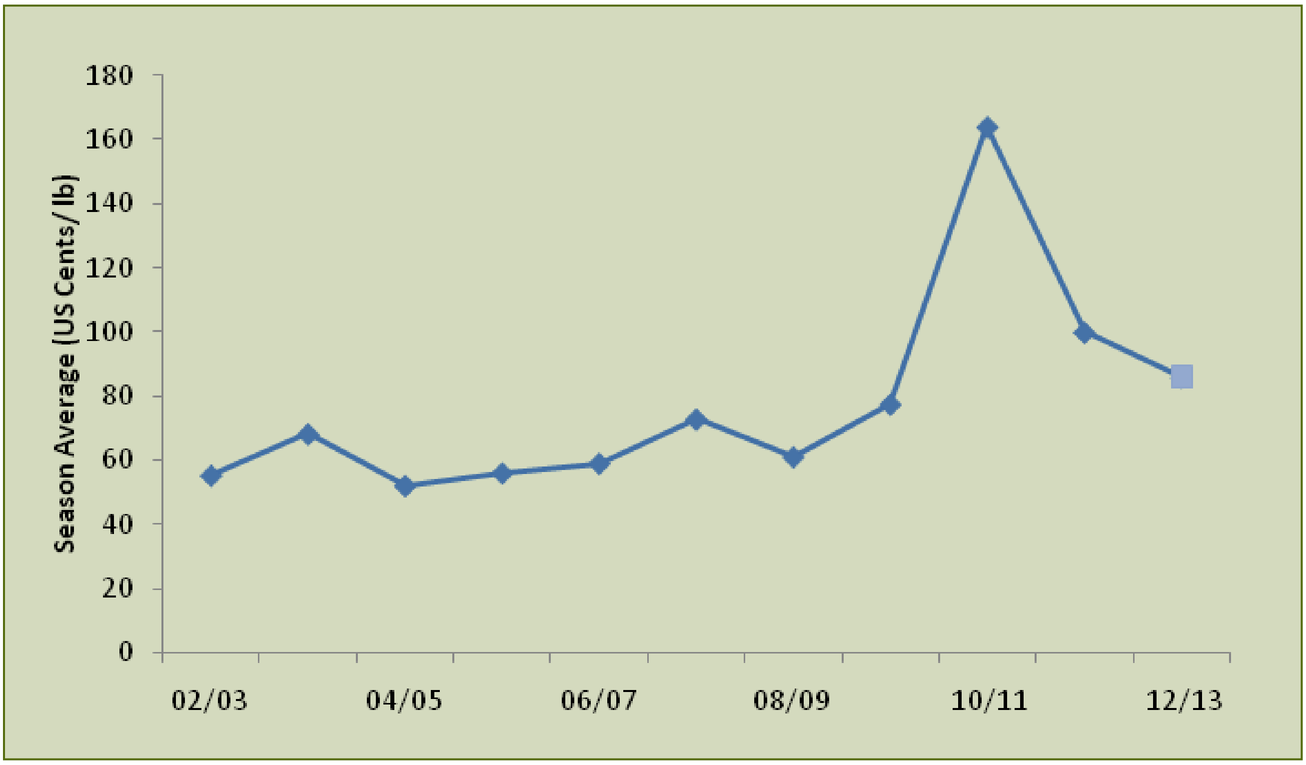
10 *The only other two developed countries receiving support for their cotton production are Greece and Spain, under the European Union Common Agricultural Policy.*

11 *Sumner, Daniel A., 2006. "Effects of U.S. Upland Cotton Subsidies on Upland Cotton Prices and Quantities," November 10.*

12 *Plastina, Alejandro, 2007. "Effects of Eliminating Government Measures in Cotton," paper presented at the 66th Plenary Meeting of the International Cotton Advisory Committee in Izmir, Turkey, October 2007.*

13 *Jales, Mário (2010). "How Would A Trade Deal On Cotton Affect Exporting and Importing Countries?". Issue Paper No. 26. ICTSD Programme on Agriculture Trade and Sustainable Development. Geneva, Switzerland.*

Figure 11: Cotlook A Index



Source: ICAC Secretariat Note: First eight months of 2012/13 (August 2012 to March 2013)

In late 2012, as the US Farm Bill was being drafted and discussed, cotton prices had been on the decline for 20 months. The Cotlook A Index in the first eight months of 2012/13 was down by 14 percent from the previous season's average and only half the record reached in 2010/11. The decrease in prices was caused by a significant rise in cotton stocks combined with weak demand. Global cotton stocks are expected to increase for the third consecutive season, to reach a record of 16.6 million tons by the end of July 2013. Demand for cotton is recovering from an episode of extremely high prices, but remains depressed by the gloomy global economy outlook.

Although the market for cotton may be recovering from peaks in prices, in the US, costs of production for cotton have not kept pace with yields, forcing the crop to fight a losing battle for land — with cotton planted area falling from a peak of 18.6 million hectares in 1925 to a low of 3.6 million hectares in 2009.[14] Long term trends within the US may be shifting production away from cotton towards other crops. High energy prices and an ethanol blending mandate have driven up the prices for competing crops such as corn and farming inputs, hurting the relative profitability of cotton and giving farmers good reason to do something else with their land.

14 de Gorter (2012)

Figure 12: Cotton acres harvested (upland)

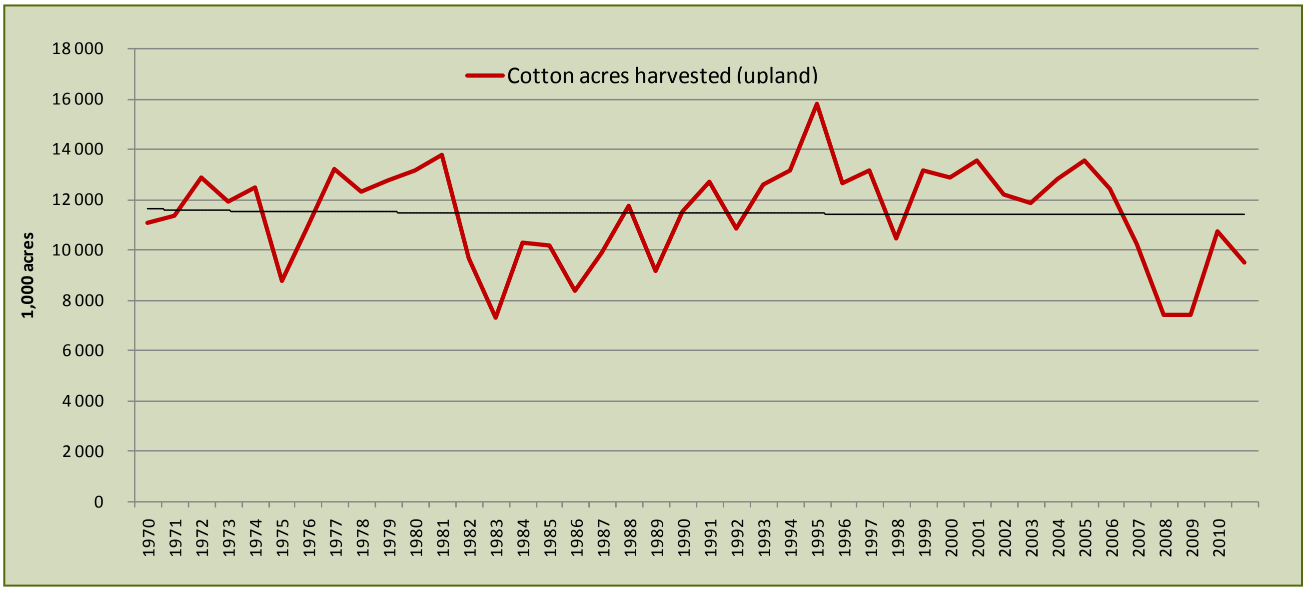
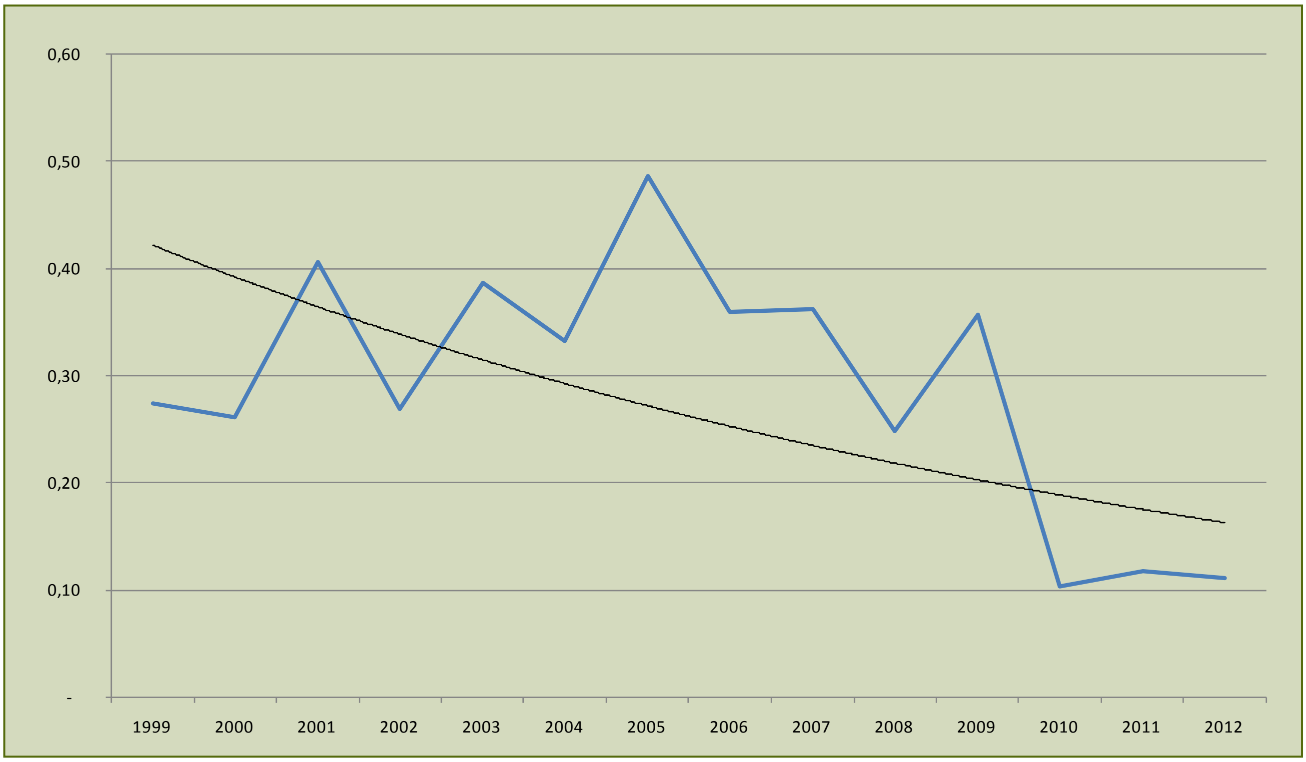


Figure 13: Total Cotton Subsidies as a share of Costs of Production



Even if the US produces less cotton in the long term, its share of global cotton exports is unlikely to disappear overnight. Recent ICTSD research on patterns of production in the US indicates that if the upcoming US Farm Bill uses minimum prices proposed under the House version of the STAX and prices for the fibre drop, production in the US may actually expand by as much as 13 percent.[15]

Given the fluctuations in stocks, prices and production, the US remains a critical component of the global cotton market. The sections that follow describe proposed changes in US policy, the WTO dispute context and examine the rise of developing countries as source and destination markets for cotton. A final section concludes with policy options.

15 Babcock (2012)

5. The *Upland Cotton* Dispute

This dispute started more than ten years ago when Brazilian negotiators first argued that American subsidies for cotton were depressing world prices and hurting the South American country's farmers, among others. After several rounds in the WTO's Dispute Settlement and Appellate Bodies, the US was found to be at fault and Brazil entitled to US$830 million in retaliatory trade measures. Rather than allowing the ruling to hurt trade, particularly with the threat of weakening protections for US intellectual property in Brazil, the two countries came to a Framework Agreement and Memorandum of Understanding in 2010. The US agreed to pay Brazil US$147.3 million per year in compensation and to review the sanitary and phytosanitary standards that were restricting beef exports from the tropical country. In exchange, Brazilian officials agreed to await changes in US legislation before pursuing any retaliatory measures and to meet with their American counterparts on a quarterly basis to review progress.[16]

In early 2012, Brazil's Ambassador to the WTO, Roberto Azevedo, wrote two letters to the US Congress to state that the reforms proposed in the upcoming US Farm Bill did not sufficiently address his country's concerns.[17] The US Farm Bill, passed every five years, is a package of support for agriculture and covers nutrition, conservation, as well as support for commodities like cotton. A pressing fiscal deficit and looming budget cuts have delayed passage. The 2008 Farm Bill expired on 30 September 2012 but was extended until 30 September 2013 by legislation passed on 2 January 2013.[18] Most subsidy programmesremained funded in the interim with some adjustments in areas such as conservation. US farm state lawmakers, generally, have been ahead of the curve, proposing a package of cuts in spending by eliminating politically unpopular direct payments while enlarging crop insurance programmes. Reforms to cotton subsidies, therefore, have come under an expansion of crop insurance programmes.

6. What is STAX?

In light of the dispute with Brazil and the insurance-oriented direction of reform in the US, the National Cotton Council (NCC) proposed the Stacked Income Protection Plan for Upland Cotton (STAX) as a supplement to the crop insurance provided for key commodities under the two proposed versions of the 2012 Farm Bill. Crop insurance protects farmers from "deep" losses, declines in revenue greater than 20 percent, while STAX is intended to cover "shallow" losses, or a drop in revenue between 10 and 20 percent, not covered by standard crop insurance. The NCC states that STAX, when coupled with other adjustments, such as the marketing loan programme, addresses the WTO dispute with Brazil. However, in his letters Ambassador Azevedo argued that the programme would result in greater budgetary outlays than the preceding 2008 Farm Bill and would "lock in" high prices for US cotton over the ensuing five year period, distorting US exportsby shielding American producers from price signals. ICTSD research shows that this may be the case when minimum prices are used, as proposed under the US House of Representatives Agriculture Committee's 2012 Farm Bill.

7. STAX and the 2008 US Farm Bill

The Farm Bill passed in 2008, formally called the Food, Conservation, and Energy Act of 2008, was negotiated and enacted as the Upland Cotton Dispute between Brazil and the US dragged on at the WTO. As such, it prescribes a series of payments that a WTO arbitration panel ruled against. Congress, at the time, agreed to provide US cotton farmers with four types of payments listed in the Table 1. Under the legislation, in effect until 30 September 2013, cotton farmers receive funds when prices for cotton fall; from subsidized insurance for disasters, when yields or revenue fall; for meeting conservation and wetland provisions and through a programme that pays them based on historical yields and prices – regardless of output. The programmes under the 2008 Farm Bill are largely similar to the direction

16 *"Brazil, US Strike 'Framework' Deal in Cotton Dispute."Bridges Weekly Trade News Digest.Vol 14 (23). 23 June 2010. International Centre for Trade and Sustainable Development. Geneva, Switzerland.*

17 *The text of the first letter is available here: http://www.brazilcouncil.org/sites/default/files/LetterfromARAtoRep.PetersonJanuary2012.pdf*

18 *"US Congress Issues Short-Term Farm Bill Extension." Bridges Weekly Trade News Digest.Vol 17 (1). 16 January 2013. International Centre for Trade and Sustainable Development. Geneva, Switzerland.*

taken in the preceding decade of agricultural policy in the United States, a shift from more to less trade distorting payments under the WTO's "green box." However, STAX and crop insurance programmes deviate from this path of reform envisioned in the Uruguay Round Agreement on Agriculture, one that placed no restrictions on minimally trade distorting "green box" subsidies. They are nonetheless a substantial shift in US farm policy according to leading experts.[19]

Federal budget pressures, record farm incomes and the cotton dispute with Brazil are the key drivers of the growth in insurance programmes — as evident in the proposals for the 2012 Farm Bill. American law-makers are expected to eliminate WTO "green-box" compatible direct payments since they have now become a domestic political liability. At the same time, high commodity prices diminished the need for the US Department of Agriculture to pay farmers on the basis of predetermined price floors, among other measures. Consequently, USDA spending on programmes declined 53 percent between 1999-2005 and 2006-2012.[20] The changing environment for agricultural policy making has led the push for revenue insurance under a "safety net" and other policy innovations to ensure that farmers continue to receive subsidies.

8. How does STAX work?

STAX is a supplemental insurance programme that pays US cotton farmers when their revenue falls more than 10 percent. Losses greater than 30 percent of revenue fall under the coverage of federally subsidized crop insurance and are not covered by STAX. Farmers pay a premium to participate in STAX and benefit from payouts when a revenue or yield loss occurs. The payouts are determined by market price records at the farm and/or county level, or by a minimum price set by the federal government.

The Agriculture Committee of the House of Representatives proposed a minimum price of US$0.6861 per pound for the 2012 Farm Bill. This price would be fixed over a five year period and farmers would receive payments even if market prices fell below the minimum price. The Senate proposed a similar provision for a minimum price that would reset at the beginning of every year and be based on market prices. ICTSD research indicates that if cotton prices were to fall over the period covered, farmers would be overcompensated.[21] Moreover, under such a scenario, farmers would also receive loan deficiency payments, a transfer made to farmers for foregoing payments under a now defunct export credit programme.

US taxpayers subsidize 80 percent of the premiums for STAX, so farmers only have to pay 20 percent of the cost of insuring their cotton crop to qualify for protection. Taxpayer subsidies for STAX are generally higher than for the federal crop insurance programme. Farmers have to pay 20 percent of the cost of insurance in the case of STAX but may pay up to 47 percent of the cost of coverage for the crop insurance programme, providing an added incentive to use STAX.[22]

STAX operates in some ways that do not complement broader crop insurance provided through the federal government. Farmers can, for example, choose to forgo the crop insurance and receive only STAX payments to supplement other farm level "shallow" losses. Additionally, farmers may also opt to be insured at the county, rather than farm, level unlike crop insurance which covers them at the county level. To get the greatest "yield" from the insurance programmes, farmers will have to make complex calculations that weigh their own projected revenues and outputs along with those of the counties in which they produce.

19 *Zulauf, Carl, and David Orden (2012). "US Farm Policy and Risk Assistance: The Competing Senate and House Agriculture Committee Bills of July 2012". Issue Paper No. 44. ICTSD Programme on Agricultural Trade and Sustainable Development.International Centre for Trade and Sustainable Development. Geneva, Switzerland.*

20 *deGorter, Harry (2012). "The 2012 US Farm Bill and Cotton Subsidies: An assessment of the Stacked Income Protection Plan. Issue Paper No. 46. ICTSD Programme on Agricultural Trade and Sustainable Development.International Centre for Trade and Sustainable Development. Geneva, Switzerland.*

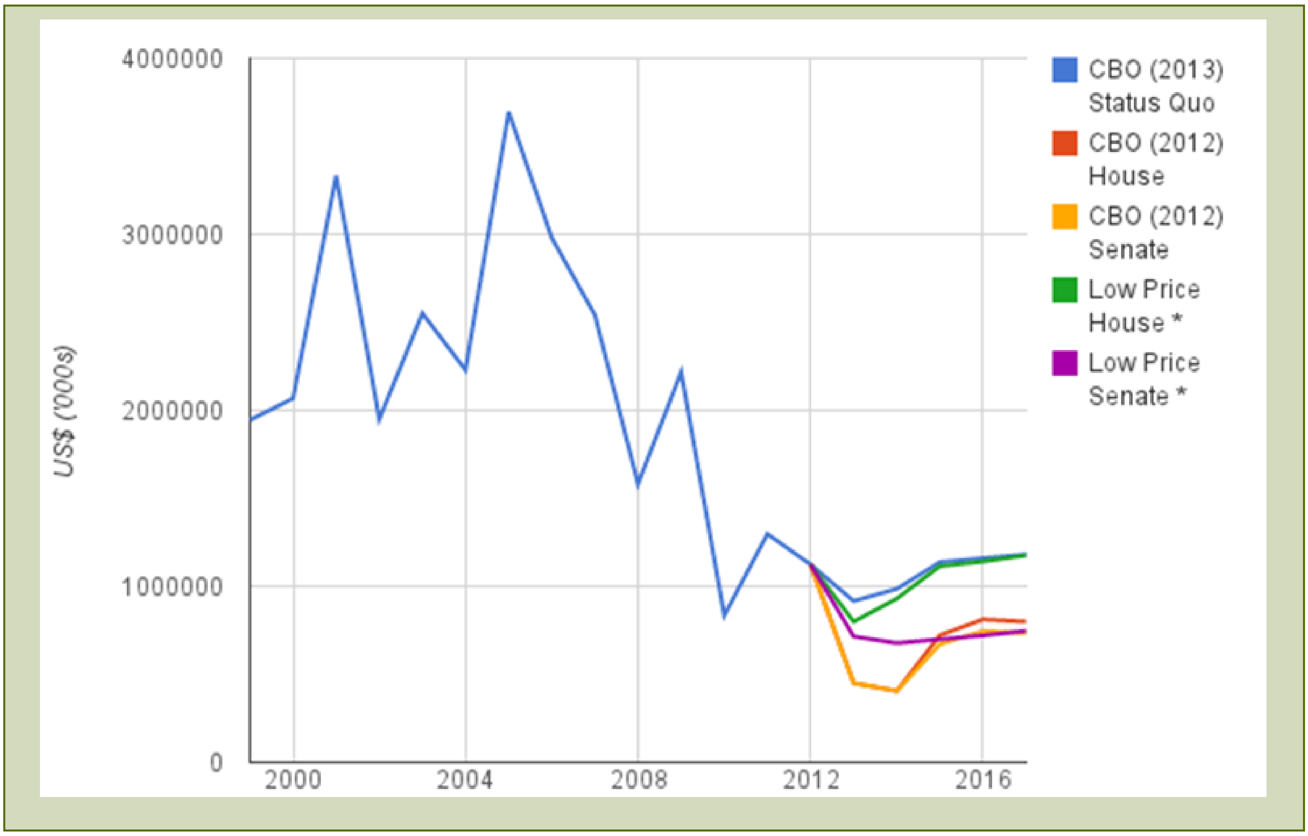
21 *Zulauf and Orden (2012) argue that crop insurance in the US overcompensates farmers, Babcock and Paulson (2012) provide the changes in production that such compensation might spur. Other studies such as*

22 *Schnepf, Randy (2011). "Brazil's WTO Case Against the U.S. Cotton Program." Document RL32571. Congressional Research Service. Washington D.C., United States.*

9. How much does STAX cost?

Estimates from the US Congressional Budget Office suggest that the country would spend, on average, US$385.1 million a year to support the STAX programme between 2013 and 2022, assuming an average cotton price of US$0.71 per pound. ICTSD analysis projects spending on STAX to nearly double at US$707.8 million per year if prices fall to US$0.479 per pound over 2013-2017, assuming the use of a minimum price.[23] Since STAX can be an add-on to the federally subsidized crop insurance programme, their interaction also has some bearing when considering total spending on cotton. Additional ICTSD research suggests that total spending on cotton could increase by US$99.5 million when STAX and the crop insurance programme are accounted for together in a low price scenario.[24] The figures presented thus far do not include the possibility that a programme like STAX may expand both farmer participation and coverage of the crop, thereby increasing spending. The evidence available to date suggests that policy makers in the US and elsewhere should pay close attention to the minimum price proposed for cotton in the 2012 House Agriculture Committee Farm Bill in the case that it skews production patterns and government outlays in times of low prices. The figure below shows historic and projected payments when STAX and the Crop Insurance Programme (CIP) are combined. It is readily apparent that US outlays will not reach their historic highs. More importantly perhaps, it is a visual presentation of the finding that the a the minimum price in the US House version of STAX under a scenario of low prices will drive up spending to status quo levels, as if there were no change in policy.

Figure 14: Historic and Projected Payments to US Cotton Farmers and Prices (STAX and CIP)



Source: Ammad Bahalim and Harry de Gorter based on de Gorter (2012), Babcock (2012) and CBO (2012)

**The low price scenario is derived from Babcock (2012) and uses prices detailed in Figure 3 to project payments.*

23 *Babcock, Bruce. N., and Nick Paulson (2012). "Potential Impact of Proposed 2012 Farm Bill Commodity Programs on Developing Countries". Issue Paper No. 45. ICTSD Programme on Agricultural Trade and Sustainable Development.International Centre for Trade and Sustainable Development. Geneva, Switzerland.*

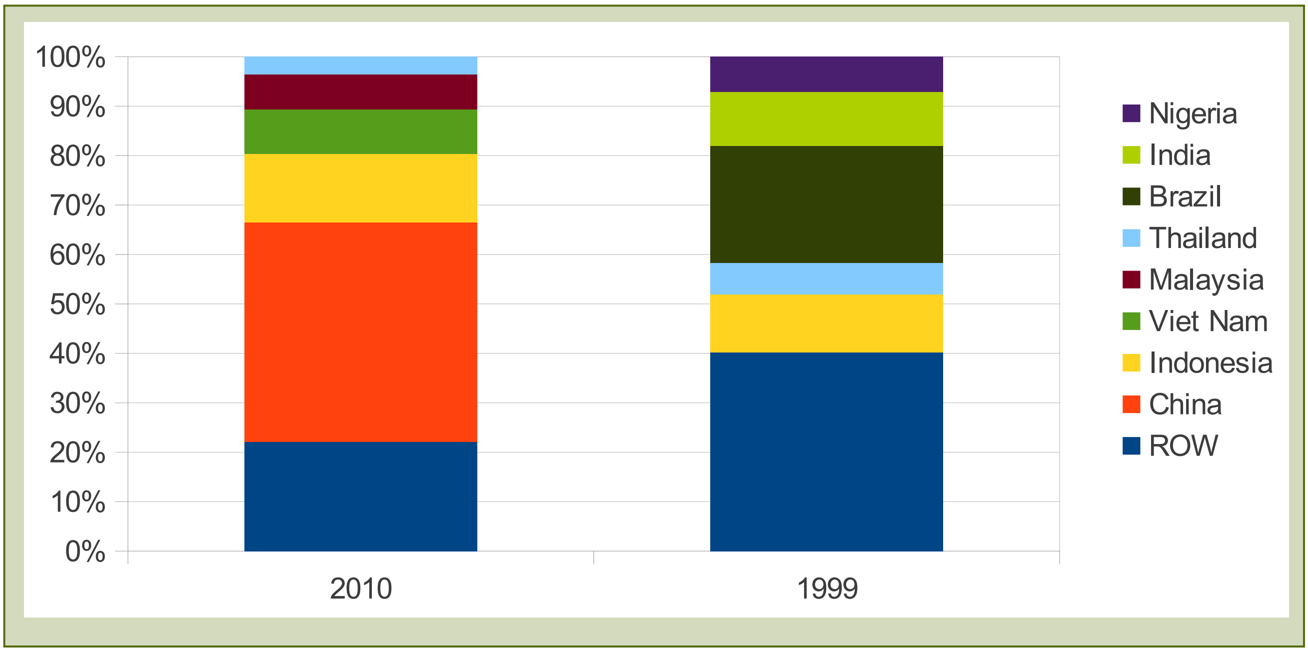
24 *A detailed comparison is available in Table 1 in de Gorter (2012) pp 15.*

10. Policy Options

The preceding decade has witnessed dramatic changes in the production and trade of cotton. Policies in both developing and developed countries remain critical for the future of the crop. Given the importance of cotton to negotiations at the WTO, the settlement of the dispute between the US and Brazil and its economic significance for developing country producers, especially those in West Africa, decision makers must carefully evaluate the choices available to them. Decision makers may want to focus on two specific and perhaps achievable objectives — STAX spending in the US and market access in emerging economies such as China.

As described earlier in this note, spending on cotton in the US is tied directly to the structure and implementation of the STAX programme and particularly the inclusion or not of a minimum price. The minimum price of US$0.6861 per pound included in the House version was found to nearly double average annual spending on cotton, from US$385.1 million to US$707.8 million, if prices fell to US$0.479 over 2013-17. Eliminating the minimum price set in the House of Representatives Agriculture Committee 2012 Farm Bill would contribute to ensuring that payments remain to historically low levels.

Figure 15: Benin Cotton Experts



Source: UN COMMTRADE

Finally, the growth in demand from developing countries presents a unique opportunity for producers to consider. In 1999 Benin, a member of the C-4 group of West African cotton producers, had almost no trade with China on cotton. However, in 2010 Chinese importers bought nearly half of all of Benin's exports. Although this is not significant development in global terms, since Benin represents less than one percent of world production, it is of strategic importance to the country as it and other C-4 members negotiate with their trading partners. The over quota tariff of 40 percent in China could be an unnecessary deterrent for trade with critical African and LDC partners. In this context, West African producing countries may wish to seek an expansion in the quota, a reduction in the over quota tariff or the inclusion of cotton in China's DFQF programme.

With delegates at the WTO eagerly anticipating developments for the Ministerial to be held in Bali in December, movement on cotton, however slight, could be a boon for the multilateral trading system. More than a decade has passed and the cotton dispute with Brazil has not found a permanent resolution nor have West African producers won hard fought changes in developed country policy. In light of developments in Geneva, Washington D.C. and the capitals of many cotton trading nations, a compromise solution based on existing policy processes, such as the US Farm Bill and the looming Ministerial, may offer yet another opportunity to finally resolve this contentious matter.

For further information visit: www.ictsd.org

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