

**U.S. Proposal for Doha Round WTO Negotiations:
What's at Stake for the U.S. Cotton Industry**

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Introduction

The *Ministerial Declaration* that emerged from the recently concluded World Trade Organization (WTO) ministerial conference in Hong Kong continued the efforts of members to reform and liberalize the world cotton market "...ambitiously, expeditiously, and specifically" (WTO, 2005). The special attention devoted to cotton serves as recognition of the nexus between trade and development and the potential role cotton plays as an engine of economic growth for some of the world's least developed countries (LDCs). The emphasis on cotton also may indicate that agreement in this area may open the door to broader agreement on the agricultural sector in general.

Before the Hong Kong Ministerial Conference, the Office of the U.S. Trade Representative floated a proposal advocating major reform in all three areas of concern identified in the Doha Development Agenda (i.e., domestic support, market access, and export competition) by all member countries, with some "special and differential treatment" for developing countries (USTR, 2005a). With respect to domestic support, the proposal included a 60 percent reduction in the final bound total aggregate measure of support (AMS) for the United States (US\$19.2 billion to US\$7.6 billion) and an 83 percent reduction in the final bound total AMS for the European Union and Japan over a five-year period. For all other countries, except LDCs, the proposed cut was 37 percent of the total bound AMS level. In the areas of market access and export competition, the proposal included substantial reductions in tariffs with deeper cuts for higher tariffs and complete elimination of all forms of export subsidies by 2010 for all products.

The Hong Kong *Ministerial Declaration* is in principle very similar to the U.S. proposal. It too advocates the elimination of all export subsidies and disciplines, the cutting of tariffs, and reductions in domestic support. However, while calling for the establishment of bands of AMS support and bands of tariff protection by which members offering higher levels of domestic support or higher tariff rates will be required to accept deeper cuts and reductions, the declaration agreement provides no specific thresholds or definitions of these bands. Further, no consensus has been achieved regarding how much each respective band will be cut.

In the words of the U.S. Trade Representative, the U.S. proposal was offered as a way to "break the deadlock" in agricultural negotiations and provide a "framework for agricultural reform" (Portman, 2005). While the office of the U.S. Trade Representative cites significant support from the American agriculture sector for its proposal (USTR, 2005b), the fundamental question remains as to what effect the U.S. proposal to liberalize agricultural markets would have on U.S. farmers. This question may be of special interest to the U.S. cotton sector since the cotton market has been targeted for special consideration. Because the U.S. cotton programs are designed to provide income support to cotton producers, what would be the effect of substantial reductions in levels of domestic support on the net farm income of U.S. cotton farmers? Would improvements in market access around the world called for in the proposal offset potential losses in U.S. net farm income following substantial reduction in the AMS? To answer these questions,

a partial equilibrium econometric model of the world fiber market, developed by the Cotton Economics Research Institute (CERI) at Texas Tech University, was used. The analysis considers two scenarios under which U.S. AMS is reduced by 60 percent. The first scenario analyzes the effects of this proposal on world and domestic cotton prices, polyester prices, U.S. government outlays, cotton production, mill use, and exports, and net farm income if the U.S. proceeds unilaterally. The second scenario analyzes these same effects as well as effects on cotton imports and exports of selected nations if the U.S. policy change is accompanied by multilateral trade reform (cuts in U.S. price support and the elimination of tariffs and cotton price supports internationally).

The Model

The Cotton Economics Research Institute (CERI) world fiber model includes 24 countries and regions, including all major cotton exporters and importers, and accounts for production area heterogeneity within some countries, substitutability between cotton and competing fibers, and linkages between raw fiber and the textile-manufacturing sector.

For a representative country, the model includes supply, demand, ending stocks, and market equilibrium conditions for both cotton and man-made fibers. The cotton A-index, domestic cotton price, cotton textile price index, non-cotton textile price index, farm price, and polyester price were endogenously solved by respectively equalizing world exports and imports. A two-step procedure was used for estimating fiber demand that connects textile output to fiber inputs. The first step involved the estimation of total domestic textile production from which the demand for all fibers was derived. In the second step, total domestic textile production (total fiber demand) was allocated among the various fibers. Thus, demand for each fiber type (cotton, man-made, and wool) was estimated according to its utilization in the textile production process.

Cotton production was modeled using separate acreage and yield equations. Cotton production is a function of the previous year's cotton net returns and the relative net returns of competing crops. Man-made fiber production was modeled using estimations of capacity and utilization. The capacity and utilization equations depend on the man-made fiber price and petroleum spot price. Imports and exports are functions of domestic price, international price (A-index), exchange rates, tariff rates, and quota restrictions.

Data used in the study were compiled from various sources. The historical and predicted macroeconomic variables (real GDP, exchange rate, population, and GDP deflator) were obtained from the Food and Agricultural Policy Research Institute (FAPRI). Cotton production, consumption, ending stocks, imports, and export data were collected from Production, Supply and Distribution (PSD) statistics of the U.S. Department of Agriculture, Foreign Agriculture Service. Fiber mill consumption and man-made fiber data were collected from the Food and Agriculture Organization of the United Nations (FAO) World Fiber Consumption Survey (before 1994) and Fiber Organon (after 1994).

Policy Shock and Assumptions

In order to analyze the effect of the U.S. Hong Kong proposal on cotton, it was first necessary to estimate that portion of U.S. AMS dedicated to the cotton sector. A five-year baseline was then estimated in which all current trade and support policies continue unabated. The first alternative scenario assumed a unilateral move by the U.S. to reduce AMS by 60 percent within a five year period. This threshold of reduction was found to be possible by reducing the U.S. cotton target price (currently 72.40 cents per pound) by 12 percent and reducing the cotton loan rate (currently 52 cents per pound) by 8 percent. All program cuts were modeled as linear using a progressive formula of equal increments¹.

The second scenario modeled the effects of U.S. cuts in AMS with a concordant removal of all cotton tariffs and cotton price supports in world markets. Thus, this scenario considered a combination of reduced price supports for cotton in the U.S. and improved market access for cotton exporters around the world. In this case, the 60 percent AMS reduction threshold was accomplished by an 9 percent reduction in the U.S. target price and a 4 percent reduction in the loan rate (the difference in percentage cuts necessary to achieve targeted AMS levels is explained by the difference in world cotton price between the two scenarios, and therefore internal support levels needed to meet 60 percent AMS cuts).

The effects of the changes in policy on the world cotton market were measured by comparing baseline estimates to alternative scenarios through 2010/11. Effects were estimated for world cotton and polyester prices, U.S. farm price, U.S. cotton production, mill use, and exports, and U.S. net farm income related to cotton. Under the multilateral trade liberalization scenario, effects were estimated for cotton imports and exports by selected major cotton trading nations.

Simulation Results

The results in Table 1 summarize the effects of a 60 percent unilateral reduction in AMS on U.S. prices and policy instruments. While such an action by the U.S. yielded modest effects on the world cotton price (+3.47 percent on average) and polyester price (+1.04 percent on average), the effect on the U.S. cotton farm prices was somewhat higher (+5.04 percent on average). The magnitude of the increase is due to a contraction of acreage because of the reduction of the target price by 12 percent and the loan rate by 8 percent over 5 years. Loan deficiency payments decreased by over 40 percent while countercyclical payments fell to zero (a 100 percent decrease) by 2010/11. An approximate 60 percent reduction of AMS was achieved by 2010/11.

Although world cotton prices increased slightly, the results in Table 2 show U.S. cotton production declining with a reduction in price supports (-3.21 percent average). Since the LDP is fully coupled to farm production while the CCP was assumed to be coupled at 50 percent in the CERI model, a reduction in these policy instruments led to less acreage, hence to reduced production levels. While marketing revenue (farm production times market price) increased as a result of the appreciating U.S. cotton farm price, cotton net farm income in the U.S. fell considerably because of substantial reduction in government payments. Cotton net farm income

¹ For a description of current U.S. cotton farm policy, please refer to the Appendix.

began to decline at the beginning of the policy shocks and reached a 26 percent decrease by 2009/10. Overall, the U.S. treasury was the beneficiary of a unilateral move based on the U.S. trade proposal with an average reduction in total government payments of 30 percent.

As Table 3 illustrates, if the changes in U.S. policy were conducted with multilateral trade liberalization of the world cotton market, a reduction of the target price by 9 percent and the loan rate by 4 percent were sufficient to achieve the 60 percent AMS reduction goal. This was possible because the U.S. farm price and the world price of cotton appreciated more under the multilateral liberalization scenario. A 60 percent AMS reduction under multilateral liberalization induced relatively high changes in the A-index, averaging 10.57 percent over the simulation period. The dynamics of the changes were also noteworthy, increasing steadily as the cumulative effects of the linear cuts in the target price and loan rate increased to reach a high at 13.28 percent in 2009/10. In 2010/11, the A-index adjusted to new market equilibrium with a 12.74 percent change relative to the baseline. The U.S. farm price followed a similar pattern, but the changes were slightly lower because of smaller cuts in U.S. acreage (see Figures 1 and 2 for a comparison of farm level and world cotton prices in the baseline and the two alternative implementation scenarios). As in the unilateral policy implementation scenario, higher domestic and international cotton prices under multilateral reform led to a rapid reduction in LDPs and CCPs with the latter declining by 100% in 2010/11. But these effects were achieved with smaller cuts than the unilateral scenario.

The results in Table 4 indicate that U.S. cotton production and exports in a multilateral trade reform setting each declined by less than 1 percent on average, a much smaller decline than that seen in the unilateral setting. Projected U.S. net farm income values still lay below their baseline levels in the multilateral trade liberalization scenario. From a relatively small decrease of 1.76 percent at the beginning of the simulation period, loss in net farm income grew rapidly, reaching almost 19 percent by 2010/11. Thus, by these estimates, multilateral liberalization only partially offsets the cotton income lost due to AMS cuts (see Figure 3).

For the rest of the world, results are analyzed by looking at the effects of the U.S. trade proposal in combination with increased market access by the removal of import tariffs. For cotton importing countries (Table 5 and Figure 4), the overall effects depend on the degree of protection that existed prior to the trade liberalization. In China for instance, the elimination of the tariff rate quota system and production subsidies led to higher imports. As Table 5 indicates, on average, Chinese imports increased an average of 6.72 percent (over 1 million bales) relative to the baseline. For Pakistan, imports increased by an average of 4.2 percent. Imports by India followed a relatively stable pattern, increasing by about 4 percent throughout the period. Turkey and the European Union provide subsidies to their producers, which if phased out would lead to a decline in production, especially in the case of the European Union where subsidies are much higher. The contraction in production led to higher imports, averaging 3.36 percent above the baseline. Higher international prices of cotton are not favorable to Korean, Taiwanese, and Japanese textile industries, which rely almost exclusively on imports for their operations. For these countries, imports were projected to decline relative to their baseline values. Of the major cotton importers reported here, the smallest effects from the U.S. proposal were seen in the area of Mexican cotton imports. While Mexican imports and exports to the U.S. are traded in a free market environment under provisions of the North American Free Trade Agreement (NAFTA),

the removal of cotton import tariffs in Mexico spurred a small increase in demand with other trading partners (+0.83 percent).

As for cotton exporters (Table 6 and Figure 5), the non- and low-subsidizing countries captured production displacement from subsidizing and less cost competitive countries. Brazil increased its cotton exports by an average of 10.65 percent, followed by Australia (5.80 percent), West Africa (5.49 percent), and Uzbekistan (4.76 percent). For Brazil, these export levels resulted from more area in the expanding frontier region entering production because of higher prices. As for Australia, irrigation water availability serves as a constraint on cotton production, and thereby cotton exports. For West Africa, limited technological innovation and continued subjugation to weather variability prevent these countries from taking full advantage of higher prices.

Conclusions

This study shows that if the U.S. acts alone with a 60 percent AMS reduction, substantial cuts in the target price and the loan rate are needed to meet the targeted AMS reduction (12 percent and 8 percent, respectively). U.S. net farm income would decrease considerably because of cutbacks in government payments that cannot be compensated by the moderate increase in U.S. farm price. If the 60 percent AMS reduction policy change is conducted with simultaneous multilateral trade liberalization from the rest of the world, the negative effect on U.S. net farm income is somewhat mitigated, but does not fully compensate for the loss in government price support (9 percent target price and 4 percent loan rate reduction). Thus, net farm income would decrease relative to the baseline in both scenarios, but by a smaller amount (18 percent vs. 12 percent) with full market access concessions. For competing cotton exporters, substantial increases in cotton exports from Brazil indicate that that nation is a primary beneficiary of the U.S. proposal, followed by other leading cotton exporters Australia, West Africa, and Uzbekistan.

References

Portman, Rob. "America's Proposal to Kickstart the Doha Trade Talks". *Financial Times*, 10 October 2005.

United States Trade Representative (USTR). "U.S. Proposal for Bold Reform in Global Agriculture Trade". October 2005a. Available online at <http://www.ustr.gov>.

_____. "American Agriculture Supports U.S. WTO Doha Agriculture Proposal for Bold Reform", 21 October 2005b. Available online at <http://www.ustr.gov>.

World Trade Organization (WTO). Doha Work Programme. Ministerial Declaration. 22 December 2005. Document Code WT/MIN (05)/DEC.

Table 1. U.S. Proposal in a Unilateral Reform Setting: Impacts on Cotton Prices and Government Programs Payments

	2006/07	2007/08	2008/09	2009/10	2010/11	Average
	(cents/pound)					
A-index						
Baseline	60.91	62.64	64.16	64.59	64.49	63.36
Unilateral Reforms	62.68	64.98	66.53	67.05	66.56	65.56
% Change	2.91%	3.74%	3.71%	3.81%	3.21%	3.47%
U.S. Farm Price						
Baseline	47.56	49.54	50.19	52.52	53.94	50.75
Unilateral Reforms	48.97	51.67	52.74	56.01	57.28	53.34
% Change	2.97%	4.30%	5.09%	6.66%	6.19%	5.04%
	(\$US million)					
LDP						
Baseline	1376.81	1304.25	1257.20	1267.19	1288.60	1298.81
Unilateral Reforms	1119.83	942.46	808.02	729.55	761.12	872.20
% Change	-18.66%	-27.74%	-35.73%	-42.43%	-40.93%	-33.10%
CCP						
Baseline	914.21	904.80	907.36	871.13	781.38	875.77
Unilateral Reforms	780.26	568.78	386.88	65.53	0.00	360.29
% Change	-14.65%	-37.14%	-57.36%	-92.48%	-100.00%	-60.33%
Government Outlay						
Baseline	3201.53	3119.56	3075.07	3048.83	2980.49	3085.10
Unilateral Reforms	2810.60	2421.75	2105.42	1705.58	1671.64	2143.00
% Change	-12.21%	-22.37%	-31.53%	-44.06%	-43.91%	-30.82%

Table 2. U.S. Proposal in a Unilateral Reform Setting: Impacts on the U.S. Cotton Industry

	2006/07	2007/08	2008/09	2009/10	2010/11	Average
	(1,000 bales)					
Production						
Baseline	21853.82	21568.73	21720.82	21867.79	21969.75	21796.18
Unilateral Reforms	21452.78	20979.08	20998	20984.35	21069.29	21096.70
% Change	-1.84%	-2.73%	-3.33%	-4.04%	-4.10%	-3.21%
Exports						
Baseline	15843.74	16024.73	16627.31	17086.77	17236.13	16563.74
Unilateral Reforms	15478.23	15458.71	15921.24	16237.32	16345.58	15888.21
% Change	-2.31%	-3.53%	-4.25%	-4.97%	-5.17%	-4.04%
	(\$US million)					
Net Farm Income						
Baseline	3840.28	3856.52	3812.86	3982.54	3965.21	3891.48
Unilateral Reforms	3576.64	3338.52	3062.62	2935.18	2933.82	3169.36
% Change	-6.87%	-13.43%	-19.68%	-26.30%	-26.01%	-18.46%

Table 3. U.S. Proposal in a Multilateral Reform Setting: Impacts on Cotton Prices and Government Payments

	2006/07	2007/08	2008/09	2009/10	2010/11	Average
(cents/pound)						
A-index						
Baseline	60.91	62.64	64.16	64.59	64.49	63.36
Multilateral Reforms	64.84	68.23	71.51	73.16	72.71	70.09
% Change	6.47%	8.92%	11.46%	13.28%	12.74%	10.57%
U.S. Farm Price						
Baseline	47.56	49.54	50.19	52.52	53.94	50.75
Multilateral Reforms	50.13	53.47	54.63	58.07	59.34	55.13
% Change	5.41%	7.93%	8.85%	10.58%	10.00%	8.55%
(\$US million)						
LDP						
Baseline	1376.81	1304.25	1257.20	1267.19	1288.60	1298.81
Multilateral Reforms	1152.09	984.58	826.58	748.91	776.09	897.65
% Change	-16.32%	-24.51%	-34.25%	-40.90%	-39.77%	-31.15%
CCP						
Baseline	914.21	904.80	907.36	871.13	781.38	875.77
Multilateral Reforms	797.59	549.91	387.01	74.62	0.00	361.83
% Change	-12.76%	-39.22%	-57.35%	-91.43%	-100.00%	-60.15%
Government Outlay						
Baseline	3201.53	3119.56	3075.07	3048.83	2980.49	3085.10
Multilateral Reforms	2860.20	2445.00	2124.10	1734.04	1686.60	2169.99
% Change	-10.66%	-21.62%	-30.92%	-43.12%	-43.41%	-29.95%

Table 4. U.S. Proposal in a Multilateral Reform Setting: Impacts on the U.S. Cotton Industry

	2006/07	2007/08	2008/09	2009/10	2010/11	Average
(1,000 bales)						
Production						
Baseline	21853.82	21568.73	21720.82	21867.79	21969.75	21796.18
Multilateral Reforms	21905.24	21564.13	21623.31	21646.17	21637.68	21675.30
% Change	0.24%	-0.02%	-0.45%	-1.01%	-1.51%	-0.55%
Exports						
Baseline	15843.74	16024.73	16627.31	17086.77	17236.13	16563.74
Multilateral Reforms	15802.54	15977.08	16527.29	16922	16934.06	16451.12
% Change	-0.26%	-0.30%	-0.60%	-0.96%	-1.75%	-0.66%
(\$US million)						
Net Farm Income						
Baseline	3840.28	3856.52	3812.86	3982.54	3965.21	3891.48
Multilateral Reforms	3772.65	3590.94	3324.30	3237.02	3215.99	3428.18
% Change	-1.76%	-6.89%	-12.81%	-18.72%	-18.89%	-11.82%

Table 5. U.S. Proposal in a Multilateral Reform Setting: Impacts on Cotton Imports of Major Cotton Importers

	2006/07	2007/08	2008/09	2009/10	2010/11	Average
	(1,000 Bales)					
China						
Baseline	16077.23	16333.21	17477.24	19029.15	20021.02	17787.57
Multilateral Reforms	17013.49	17328.76	18694.02	20418.18	21506.44	18992.18
% Change	5.82%	6.10%	6.96%	7.30%	7.42%	6.72%
India						
Baseline	801.91	707.06	631.83	572.13	681.56	678.90
Multilateral Reforms	838.15	737.36	656.59	595.09	709.50	707.34
% Change	4.52%	4.29%	3.92%	4.01%	4.10%	4.17%
Pakistan						
Baseline	1681.70	2020.28	2133.69	2192.62	2060.81	2017.82
Multilateral Reforms	1739.28	2083.67	2221.71	2297.07	2175.29	2103.40
% Change	3.42%	3.14%	4.13%	4.76%	5.55%	4.20%
Japan						
Baseline	719.03	698.64	644.21	578.60	516.35	631.37
Multilateral Reforms	716.43	682.93	630.33	563.96	503.91	619.51
% Change	-0.36%	-2.25%	-2.15%	-2.53%	-2.41%	-1.94%
South Korea						
Baseline	1225.85	1148.93	1098.18	1042.53	963.39	1095.78
Multilateral Reforms	1218.44	1135.35	1076.17	1012.04	926.70	1073.74
% Change	-0.60%	-1.18%	-2.00%	-2.92%	-3.81%	-2.10%
Taiwan						
Baseline	1209.35	1225.51	1162.53	1148.72	1133.32	1175.89
Multilateral Reforms	1209.43	1181.62	1115.37	1102.68	1083.62	1138.54
% Change	0.01%	-3.58%	-4.06%	-4.01%	-4.39%	-3.21%
Mexico						
Baseline	1401.18	1306.83	1278.94	1235.38	1219.50	1288.37
Multilateral Reforms	1399.49	1313.05	1291.10	1251.72	1238.35	1298.74
% Change	-0.12%	0.48%	0.95%	1.32%	1.55%	0.83%

Table 5. (Continued) U.S. Proposal in a Multilateral Reform Setting: Impacts on Cotton Imports of Major Cotton Importers

	2006/07	2007/08	2008/09	2009/10	2010/11	Average
	(1,000 bales)					
European Union						
Baseline	2241.37	1673.55	1598.49	1525.91	1450.87	1698.04
Multilateral Reforms	2313.12	1726.73	1656.56	1575.40	1502.59	1754.88
% Change	3.20%	3.18%	3.63%	3.24%	3.56%	3.36%
Turkey						
Baseline	3462.73	3497.15	3391.30	3310.63	3269.29	3386.22
Multilateral Reforms	3564.77	3608.76	3506.74	3423.12	3372.57	3495.19
% Change	2.95%	3.19%	3.40%	3.40%	3.16%	3.22%

Table 6. U.S. Proposal in a Multilateral Reform Setting: Impacts on Cotton Exports of Major Cotton Exporters

	2006/07	2007/08	2008/09	2009/10	2010/11	Average
	(1,000 bales)					
Australia						
Baseline	2859.96	2876.18	2794.36	2813.25	2860.43	2840.84
Multilateral Reforms	2985.54	3021.55	2944.06	2992.29	3085.16	3005.72
% Change	4.39%	5.05%	5.36%	6.36%	7.86%	5.80%
Brazil						
Baseline	2132.16	2831.67	3029.53	3269.68	3623.30	2977.27
Multilateral Reforms	2300.06	3102.20	3369.23	3651.89	4091.03	3302.88
% Change	7.87%	9.55%	11.21%	11.69%	12.91%	10.65%
Uzbekistan						
Baseline	4495.75	4553.77	4585.97	4673.44	4712.16	4604.22
Multilateral Reforms	4686.32	4773.41	4825.80	4890.54	4941.80	4823.57
% Change	4.24%	4.82%	5.23%	4.65%	4.87%	4.76%
West Africa						
Baseline	3654.31	3820.23	3980.78	4109.05	4182.71	3949.42
Multilateral Reforms	3825.20	4014.71	4201.32	4353.17	4441.34	4167.15
% Change	4.68%	5.09%	5.54%	5.94%	6.18%	5.49%

Figure 1. U.S. Cotton Farm Prices under Various Policy Scenarios: Baseline, Unilateral Reforms, and Multilateral Reforms

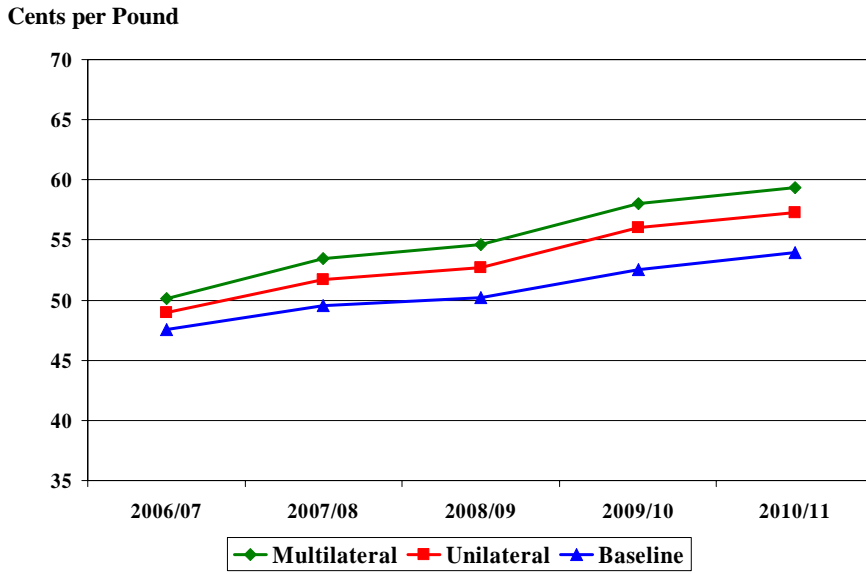


Figure 2. World Cotton Prices under Various Policy Scenarios: Baseline, Unilateral Reforms, and Multilateral Reforms

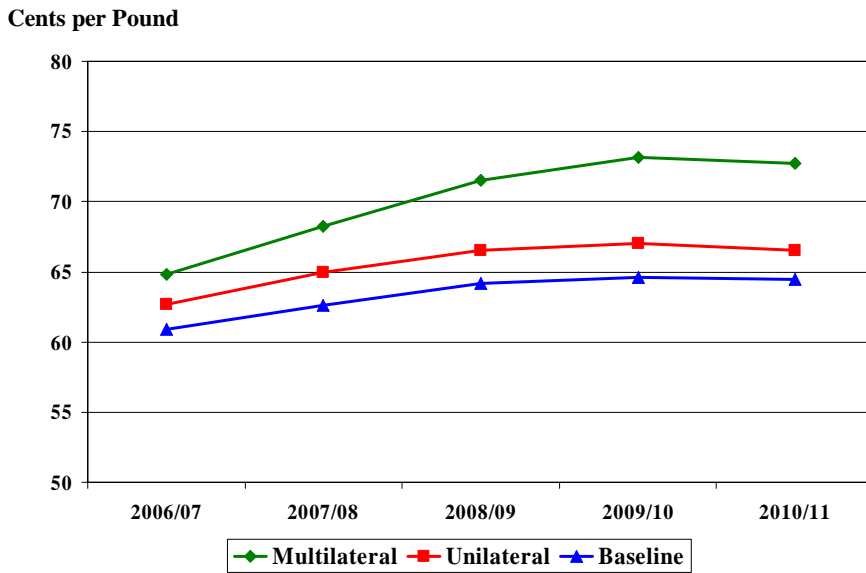


Figure 3. U.S. Cotton Net Farm Income under Various Policy Scenarios: Baseline, Unilateral Reforms, and Multilateral Reforms

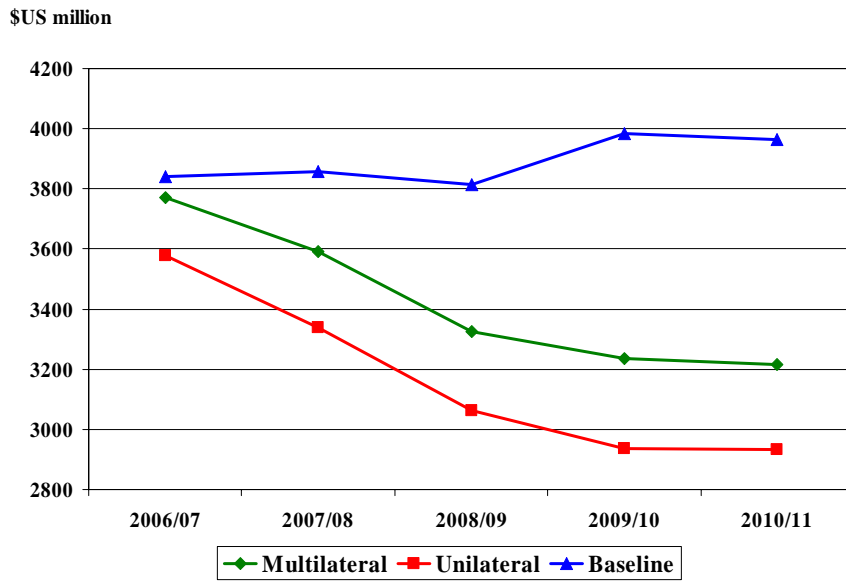


Figure 4. U.S. Proposal with Multilateral Trade Reforms: Average Effect on Major Cotton Imports

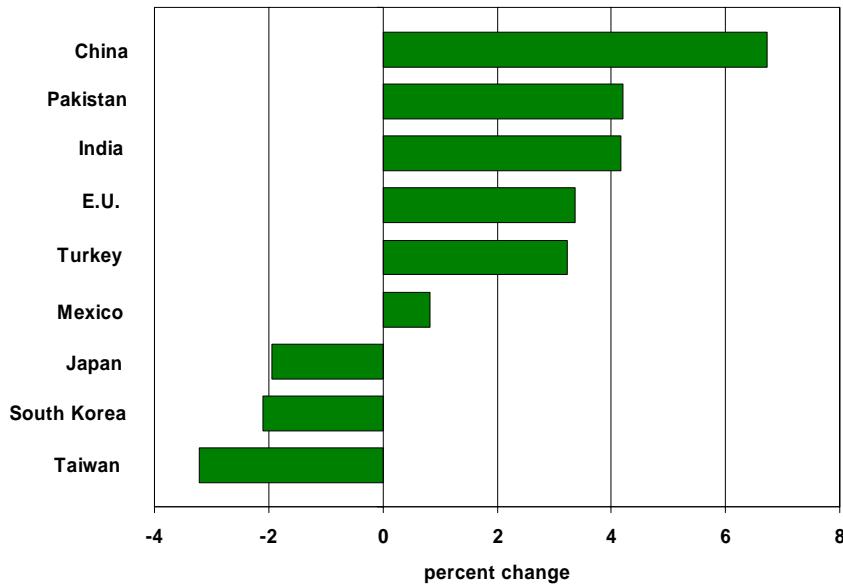
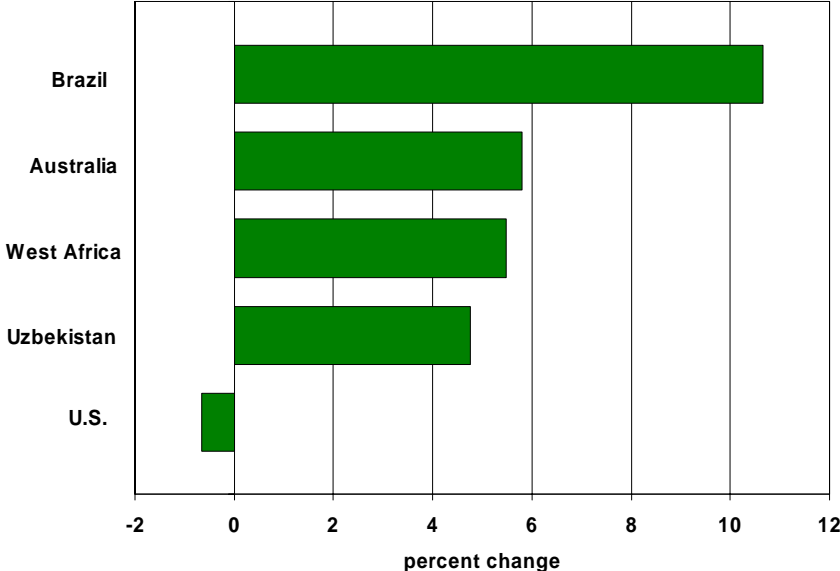


Figure 5. U.S. Proposal with Multilateral Trade Reforms: Average Effect on Major Cotton Exports



Appendix

Major Components of U.S. Cotton Programs

Direct Payments

Under the 2002 Farm Act, farmers and eligible landowners receive annual fixed payments. The amount of the direct payment is equal to the product of the payment rate, payment acres, and payment yield. The 2002 Farm Act sets the payment rate for upland cotton at 6.67 cents per pound for crop years 2002-2007. Payment acreage is set at 85% of base acreage. Payment yields for direct payments remain at levels specified by the 1996 Farm Act.

Counter-Cyclical Payments

Counter-cyclical income support payments (CCP) were designed to provide a counter-cyclical income safety net to replace most ad hoc market loan assistance payments that were provided to farmers during 1998-2001. Payments are based on historical production and are not tied to current production. CCP are available for covered commodities whenever the effective price is less than the target price. The payment amount is equal to the product of the payment rate, the payment acres (85% of base acres), and the payment yield. Counter-cyclical payments are available to contract holders whenever a program crop's target price is greater than the effective price. The effective price is equal to the sum of 1) the higher of the national average farm price for the marketing year, or the national loan rate for the commodity and 2) the direct payment rate for the commodity. The payment amount for a farmer is the product of the payment rate, the payment acres, and the payment yield. The upland cotton target price is 72.4 cents per pound for the duration of the farm bill. The payment for an individual cotton farmer is determined as

$$\text{Payment rate}_{\text{cotton}} = (\text{target price})_{\text{cotton}} - (\text{direct payment rate})_{\text{cotton}} - (\text{higher of commodity price or loan rate})_{\text{cotton}}$$

$$\text{CCP}_{\text{cotton}} = ([\text{Base acres}]_{\text{cotton}} \times 0.85) \times (\text{payment yield})_{\text{cotton}} \times (\text{payment rate})_{\text{cotton}}$$

Marketing Loan Benefits

The Farm Service Agency (FSA) administers commodity loan programs with marketing loan provisions for upland cotton through the Commodity Credit Corporation (CCC). The CCC loan programs allow producers of designated crops to receive a loan from the government at a commodity-specific loan rate per unit of production by pledging production as loan collateral. After harvest, a farmer may obtain a loan for all or part of the new production. These loans may be repaid in three ways: at the loan rate plus interest costs (CCC interest cost of borrowing from the U.S. Treasury plus 1%), by forfeiting the pledged crop to the CCC at loan maturity, or at the alternative loan repayment rate. The marketing loan rate for upland cotton is 52 cents per pound for 2002-2007.

Step-2 payments

Step 2 payments, sometimes referred to as the "user marketing certificate program," are made to U.S. cotton users and exporters when U.S. prices are higher than world prices. The United States has agreed to end the Step 2 program at the conclusion of the current (2005/06) marketing year.