

Reducing Cotton Subsidies: The DDA Cotton Initiative

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The current round of World Trade Organization (WTO) negotiations differs in several ways from the previous half-century of multilateral negotiations under the General Agreement on Tariffs and Trade (GATT). It is not just that there is now a formal organization to convene the talks, or that the talks are not called a “round” (as in “Uruguay Round” or “Kennedy Round”) but the Doha Development Agenda (DDA). The most important differences in the current set of negotiations are the shifts in attention toward developing countries and even some of the least developed countries (LDCs). Cotton subsidy issues have been near the center of both these changes.

That the DDA was delayed and that one significant source of the roadblock was agriculture was not surprising. The same delays plagued the GATT Uruguay Round negotiations that dragged on for seven years. This time, however, the important division is not mainly between Japan and the European Union on one side and the United States and its Cairns Group allies on the other. In the DDA, the split has been between the rich agricultural subsidizers, especially the United States and the European Union, and large developing countries, led by Brazil. Part of Brazil’s influence and leadership has resulted from its successful WTO challenges of cotton policies in the United States and sugar export subsidies in the European Union. Furthermore, LDCs, led by four West and Central African cotton exporters with their “cotton initiative,” have also garnered much attention and caused the

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Doha negotiations to focus on links between farm subsidies in rich countries and economic development of agriculture in poor countries.

Benin, Burkina Faso, Chad, and Mali, the countries that proposed the cotton initiative, have tiny economies and no particular clout in international relations or in the international economy. Nonetheless, their proposal for accelerated elimination of trade-distorting cotton subsidies and financial compensation for losses while subsidies are being eliminated has been included as a central issue in the WTO negotiations. (The WTO summarizes the issue and provides access to documents at the Web site page at WTO 2005a.)

<<A>>Why Cotton?<<end>>

Many countries have specific products, services, or issues that are of particular concern in their trade relationships. These seldom are proposed as separate initiatives in trade negotiations. When they are proposed, such initiatives seldom get much attention. The experience of the cotton initiative in the DDA has been different. It has been embraced at the highest levels of the WTO and has been accorded unprecedented global attention. All this for a farm commodity with total global export value of less than \$10 billion, only a small percentage of the value of world agricultural exports, and a truly tiny fraction of the value of global trade in goods.

The cotton issue caught the attention of world leaders and WTO negotiators for several reasons. First, heads of state of several very poor nations have championed the issue. They flagged the issue as vital to their overall national interests and the very survival of large segments of their populations.

Second, their arguments were more than political rhetoric. Cotton is a very important tradable commodity for the countries that have sponsored the initiative. Cotton comprises approximately 30 percent of total exports of the four West African nations that proposed the initiative and accounts for a significant share of rural incomes of millions of poor farmers in that region (Minot and Daniels 2001).

Third, cotton subsidy policy is concentrated in a few rich countries. Developing countries provide little domestic support, but they do apply agricultural border barriers. Therefore, a sector initiative that focuses on subsidies may garner broad support among

developing countries. The EU provides the highest per unit support, but cotton is a minor crop even in the two EU countries, Greece and Spain, that produce cotton. The United States is the only WTO member that highly subsidizes cotton and that plays a significant role in the global cotton market.

Fourth, cotton subsidies have little second-round benefit for poor countries. Sugar and rice are also heavily subsidized and protected and contribute to the incomes of many of the world's poor. Widespread import barriers restrict sugar and rice trade, however. Unlike rice, where poor nonfarm consumers likely gain from lower world prices, the rich-country cotton subsidies likely have little benefit for any of the poor in poor countries. And, unlike sugar, for which some poor countries get valuable preferential access to rich-country markets, there are no poor-country cotton producers that gain from the rich-country cotton subsidies.

Finally, the cotton cause was adopted as the lead issue by global nongovernmental organizations, especially IDEAS in Switzerland, which helped develop the initiative (Baffes 2005), and Oxfam, which developed some of the most dramatic evidence and publicized the issue effectively in Europe and North America (Oxfam 2002, 2004).

These reasons may help explain why the cotton initiative got as much attention as it did. However, none of this discussion suggests that removing cotton subsidies alone, while leaving other subsidies and trade barriers in place, would improve substantially the lot of the world's poor overall, or that it is an optimal negotiating strategy for LDCs.

<<A>>The DDA Cotton Initiative: Original Content and Negotiating Developments<<end>>

Suggestions for separate negotiating initiatives for specific products or services sometimes have been raised in the GATT/WTO. Historically, broad areas such as textiles and agriculture have been separated because of special rules and exceptions and, typically, a *reduced* pace of liberalization. Those wishing faster or more complete liberalization for some product groupings have sometimes suggested that accelerated tariff cuts be agreed on a sectorwide basis. These suggestions have not survived to the final agreements, however. For example, in the Uruguay Round negotiations, suggestions for zero-for-zero tariffs for oilseeds were discussed but not implemented. Currently U.S. industry interests are urging elimination of

market access restrictions for all fruits and vegetables. This sectorwide initiative has received little attention.

The proposed cotton sector initiative for the Doha negotiations is unique in its combination of elements. It was proposed at the highest political level mainly to deal with domestic support policies of one major export competitor. The proposing nations also suggested compensation for commercial losses caused by lowered prices resulting from the offending subsidies. In the DDA negotiations in Cancún, the proposed initiative was the subject of extensive media coverage, and the WTO director general led the discussions (WTO 2003a).

The four African cotton-exporting nations initially submitted their cotton initiative in a letter to the director general on April 30, 2003, and presented the initiative to the WTO Trade Negotiating Committee on June 10, 2003 (WTO 2003b). President Blaise Compaore of Burkina Faso stated the objectives and motivation of the four countries in a speech to that committee on the same day (WTO 2003c). He urged that “a mechanism be set up to progressively reduce support to cotton production and export, with a view to fully suppressing all cotton subsidies at a defined deadline.” Moreover, he asked that “as an immediate and transitory measure in favor of least developed countries, a mechanism be adopted to compensate their farmers for the revenue losses incurred because of cotton subsidies.” And to emphasize the importance of the initiative, he further stated, “African countries share the opinion that a satisfactory settlement for the cotton subsidy issue is both a must for the current negotiation round and a test that will allow member States to prove their sincerity behind the commitments taken at Doha.”

Under the proposal, compensation is to be paid to cotton growers or their local organizations. The specific compensation proposal has four elements. First, it asks that the amount of the proposed compensation be calculated on the basis of cotton subsidies and market conditions during the period 1999 through 2002. The amount of \$250 million a year is highlighted in the proposal, based on data from the International Cotton Advisory Committee (ICAC 2002) and the work of Goreux (2003). Second, compensation would be reduced proportionately as subsidies are phased down on the path toward elimination. Third, responsibility for compensation payments would be allocated on the basis of each member’s

share of total cotton subsidies, and fourth, payments would be allocated to beneficiary LDC countries based on their share of cotton production.

The cotton initiative began receiving serious consideration as soon as it was proposed. The failure of the Cancún ministerial to reach a framework agreement was attributed in part to the failure to address the cotton initiative adequately. For that reason, the December 2003 meeting of the General Council of the WTO devoted considerable attention to the cotton initiative and reported enough progress to allow the general Doha negotiation to proceed.

The August 2004 WTO decision of the General Council that set the framework for the final stage of negotiations (known as the July Framework Agreement) dealt with the cotton initiative in the main text in paragraph 1(b) (WTO 2004a). It states that the trade-related aspects of the initiative will be dealt with in the context of the agricultural negotiations. The development (or compensation) aspects of the initiative are being dealt with by a separate WTO committee in a process that includes the World Bank and the Food and Agriculture Organization of the United Nations (FAO), among other institutions. Thus, while they continue to be linked in the rhetoric, the proposed subsidy reductions and the proposed development aid that now encompasses the “compensation” part of the cotton initiative are being pursued separately.

In Annex 1 of WTO (2004a), where the framework for the agricultural negotiations is laid out, the cotton initiative is given considerable additional discussion beginning in paragraph 4, which is worth listing in full:

The General Council recognizes the importance of cotton for a certain number of countries and its vital importance for developing countries, especially LDCs. It will be addressed ambitiously, expeditiously, and specifically, within the agriculture negotiations. The provisions of this framework provide a basis for this approach, as does the sectoral initiative on cotton. The Special Session of the Committee on Agriculture shall ensure appropriate prioritization of the cotton issue independently from other sectoral initiatives. A subcommittee on cotton will meet periodically and report to the Special Session of the Committee on Agriculture to review progress. Work shall encompass

all trade-distorting policies affecting the sector in all three pillars of market access, domestic support, and export competition, as specified in the Doha text and this Framework text.

Surrounded by nice rhetoric, two key points are contained in this statement. First, the reduction of cotton subsidies will not be negotiated on a fast track separate from the rest of the Doha negotiations. Instead cotton subsidy reductions will be negotiated as a part of the overall agriculture agreement. Second, negotiating the reduction of cotton subsidy rates as a part of the agricultural agreement does not preclude applying higher reduction rates or other special provisions to cotton. This point is made implicitly by noting that the “Special Session of the Committee on Agriculture shall ensure appropriate prioritization of the cotton issue independently from other sectoral initiatives.”

<<A>>**Cotton Production and Trade**<<end>>

To appreciate the economic context of the cotton initiative, it is important to have some background on global cotton production, consumption, and trade. Baffes (2005) provides a very useful interpretive summary of the global cotton situation and outlook. For most of the past 15 years, China has produced about 25 percent of the world total. Currently, the United States accounts for another 20 percent of world production, as do India and Pakistan together. China, India, and Pakistan are such major cotton textile-processing centers that all are net importers of cotton. The United States and the countries of West and Central Africa (taken together) are the major exporters, along with Uzbekistan and to a lesser degree Australia. Europe is a minor cotton producer (represented mainly by Greece and Turkey) and a large net importer.

Cotton textile manufacturing has shifted increasingly to developing countries as the textile trade has been liberalized. About two-thirds of cotton produced in the United States is now exported and U.S. exports account for about 40 percent of world exports. The United States cotton-milling industry continues to shrink. This means an increasing share of cotton production in the United States is exported and re-imported as textile products. The baselines by the Food and Agricultural Policy Research Institute (FAPRI 2004) and U.S. Agriculture

Department's Economic Research Service (ERS 2004) provide much more detail on the outlook for global cotton production and trade if no change is made in the current policy path.

<<A>>Global Cotton Subsidies and Protection<<end>>

Cotton import tariffs are applied mainly in cotton-exporting countries and are typically in the range of 10 percent. Some countries also impose import tariff rate quotas, with very high tariffs for above-quota quantities, but these quotas are not filled and the prohibitive tariffs are not applied. For example, in the United States in 2002, the cotton quota was about 73,000 tons, but imports totaled 6 tons. In China the in-quota quantity has been unilaterally increased to assure that the official tariff rate quota does not restrict imports (Baffes 2003).

There are no WTO-notified export subsidies for cotton such as those the European Union continues to use for many other commodities. The United States, however, applies programs that the recent WTO cotton panel ruled were unlisted export subsidies (Schnepf 2004; WTO 2004c). These include both the Step 2 export program and the export credit guarantee programs operated by the general sales manager of the U.S. Department of Agriculture (USDA). The International Cotton Advisory Committee also classifies the U.S. Step 2 export program as an export subsidy; in addition it has calculated what it considers to be export subsidies for China, based on information about differences between internal and border prices (ICAC 2004).

The Chinese cotton subsidy situation is complex and unsettled with conflicting information and a lack of transparency. Baffes has summarized data from the ICAC and other sources (Baffes 2004, 2005; ICAC 2002, 2004). Shui (2004) also provides recent information. The general consensus is that China provided a major subsidy to the industry in managing liquidation of its cotton stocks from the late 1990s through 2001. The government registered financial losses during that period because it sold cotton, which it bought at higher prices in the 1990s, at the bottom of the market—even though that further depressed prices. Thus it is not clear that growers benefited much from the government's mishandling of an attempted stabilization policy that actually caused more market price variability and accentuated market price declines in the later period. The FAO and others have investigated the current Chinese cotton policy situation, but those results have not yet been published. As Baffes (2005) notes,

“the fact that China subsidizes its cotton, however, is not uniformly accepted. Fang and Beghin (2003), for example, estimate that between 1997 and 2000, the nominal protection coefficient for cotton averaged 0.80, implying that China taxes its cotton sector. The different views on the nature and degree of intervention reflect the complexities of China’s agricultural policies as well as the unreliability of the data.” Current policy changes in China suggest that production or export subsidies are now quite small (Goreux 2004).

According to ICAC, Brazil, the Arab Republic of Egypt, Mexico, and Turkey have also provided domestic support for cotton. Support has tended to be small and intermittent and has been zero in Brazil in more recent years (ICAC 2002, 2004). In Uzbekistan, the world’s fourth-largest producer of cotton, the sector is largely controlled by the government with a net tax applied on cotton production rather than a subsidy. Furthermore, it appears that price transmission to that market from world market conditions is quite limited (Baffes 2004).

Because other programs are small, or not well understood and expected to be small, the cotton initiative in the Doha negotiations targeted domestic support programs in the United States and the European Union and not other barriers and subsidies. In addition, of course, developing-country cotton producers would be unlikely to provide significant compensation, even if their subsidies were to continue.

European Union cotton production is concentrated in Spain and Greece. Production grew rapidly after these countries entered the EU and became eligible for Common Agricultural Policy subsidies (Karagiannis 2004, Baffes 2004). ICAC data show that average assistance in the European Union has been in the range of \$1.00 a pound in 2002 and 2003, whereas the world price has been in the range of \$0.50 to \$0.60 a pound. ICAC lists a total EU subsidy of slightly less than \$1 billion in recent years, with production in the range of 425,000 tons. Hence, the benefits from the subsidy have been about double the potential revenue from market sales at world prices. Substantial subsidies also appear in EU notifications to the WTO (Poonyth and others 2004). The form of subsidy to cotton in the EU is complex and includes various output-related programs and some input subsidies. The EU also applies limits on production eligible for subsidy, but these do not apply to individual farms and thus it is not clear that they are binding on farmer production behavior (Baffes 2004). It is not correct to consider the EU programs as a pure per unit or ad valorem

production subsidy. Furthermore, in 2005 the EU is scheduled to change the program to a partially decoupled area payment together with a direct payment tied to cotton production for the 2005 season (Karagiannis 2004).

The United States also applies a wide range of complex programs that subsidize cotton production and trade, and, because the United States is a large cotton producer and exporter, the effects of these subsidies are larger than the higher per unit subsidies applied in the European Union. The U.S. programs apply primarily to upland cotton, which is the most common type in world markets. Major subsidy programs that apply to cotton include crop insurance subsidies, export credit guarantees, direct payments, countercyclical payments, marketing loan benefits, Step 2 payments to domestic users, and Step 2 payments to exporters. This list alone suggests the complexity of cotton subsidy programs, but each of the individual programs also has an array of provisions (WTO 2004c; Sumner 2003).¹

The overall budget outlay for these programs varies inversely with various market prices and, in the case of crop insurance subsidy, with the weather and crop conditions. Recent total annual subsidies have ranged between \$1.5 billion and nearly \$4.0 billion (Baffes 2004; ICAC 2004). The totals do not include outlays or budget commitments for crop insurance and export credit guarantee programs.

Measures such as budget costs or contributions to the aggregate measure of support are interesting summaries but are not sufficient for analysis of impacts. For example, the direct payment program and the countercyclical payment program each pay recipients per unit of land on which cotton was historically grown, not per unit of current cotton output. Nonetheless, most land receiving these payments continues to be used for cotton, and subsidy rules limit what can be grown on the base. These and other features suggest that these payment programs likely affect production, but to a smaller degree than would per-unit production subsidies tied to current output. The marketing loan program offers payments per unit of upland cotton production whenever the specified market price is below the “loan rate” or government-set trigger price for payments. The marketing loan program therefore has direct and significant production effects.

The Step 2 program pays exporters and domestic users of U.S. cotton the difference between the internal U.S. market price and an average of selected low-end prices in

international markets. Hence, eligible buyers are assured that the net price for U.S. cotton will remain competitive. This program stimulates demand for U.S. cotton. The export credit guarantee program promises banks financing exports of U.S. cotton that the U.S. government will repay loans should the buyer fail to repay them. This allows buyers to acquire lower-cost credit to make purchases of U.S. cotton. Finally, the crop insurance program provides premium subsidies of more than 50 percent and covers excess losses of insurance companies should they occur. The result is availability of crop insurance coverage that would not otherwise be found and at a far lower cost than would be charged in a purely commercial insurance market.

<<A>>Effects of Cotton Subsidies on Markets<<end>>

The effects of these EU and U.S. subsidies on global markets for cotton have been the subject of intense analysis and attention for several years, in large part because of the high profile of both the WTO dispute on U.S. cotton subsidies brought by Brazil and the DDA cotton initiative. This section examines the likely effects of removing the subsidy and looks at the magnitude of appropriate compensation.

Various studies differ in their coverage of subsidy policies, time horizons, and base periods, that is, they ask different specific questions about the effects of cotton subsidies. The studies also differ in parameter choices and thus would arrive at different results even if they focused on the same questions. Many of the relevant studies have been helpfully reviewed by the FAO (2004) and by other recent reports, including Goreux (2004), Poonyth and others (2004), Gillson and others (2004), Oxfam (2004), and Baffes (2005). Earlier studies include Goreux (2003), Sumner (2003), ICAC (2002), Oxfam (2002), Tokarick (2003), and Reeves and others (2001). Additional studies include Shepherd (2004), Pan and others (2004), Fadiga, Mohanty, and Pan (2004), and Karagiannis (2004). The last of those was the only study to concentrate on the effects of removing EU subsidy programs.

The basic approach of all the studies, except Shepherd's, has been to develop simulation models specified with a set of supply and demand parameters. The models are used to pose counterfactual questions of the following form: what would the market prices, quantities, and other aggregates be (or have been) in the absence of the subsidy programs

considered? Karagiannis (2004) not only considered past program effects in Greece and Spain, he also analyzed the likely effects of the EU reform scheduled for 2005. The reform reduces the subsidy effects, but the new regime continues to have a substantial subsidy tied to the production of cotton. Given high costs of cotton production in Europe and the very high base-subsidy levels, complete removal of the production subsidy element would further reduce EU cotton output.

Several studies examined how subsidies would have affected past market conditions if subsidies had not been in place during the periods considered. That was the main relevant question posed in the WTO dispute concerning U.S. cotton subsidies, for which the Sumner (2003) analysis was developed. Some recent work motivated in part by the WTO dispute misses that important point (Pan and others 2004). For the cotton initiative (and for the “threat” issues posed in the WTO cotton dispute), the more relevant issue is how removal of cotton subsidies now would affect the future path of cotton prices, quantities, and other aggregates. For example, simulations by Sumner (2003); Pan and others (2004); and Fadiga, Mohanty, and Pan (2004) explicitly project how removing U.S. subsidies would affect future market conditions under assumptions of baseline projections.

The recent FAO review lists estimated price declines from removing subsidies that range from about 30 percent (ICAC 2002) to a low of about 3 percent (Tokarick 2003). The closely related studies by Pan and others (2004) and Fadiga, Mohanty, and Pan (2004) find estimates at the low end of the range, as does the study by Poonyth and others (2004). Studies at the upper end of the range include those by Gillson and others (2004) for some of their scenarios. The studies by Sumner (2003), Reeves and others (2001), and Goreux (2003) (for some of his scenarios) are in the middle of the range for price effects, although they are quite different in parameters and some findings. The studies at the high end of the range tend to treat all subsidy outlays as fully tied to production. They also begin with low-priced base years and use relatively inelastic demand elasticities and relatively low supply elasticities. In addition ICAC considers relatively high subsidies on Chinese production in the base case. The studies at the low end of the range leave out some subsidy programs (such as partially decoupled payments, crop insurance, Step 2 programs, and export credit programs in the United States). These studies, especially the ones by Pan and others (2004) and Fadiga,

Mohanty, and Pan (2004), also use high demand and supply elasticities or begin with high-priced baselines.

The projected baseline matters significantly, in part because the degree of subsidy in the United States depends on the baseline prices for cotton and on commodities that compete for the same land and other resources. If cotton prices are expected to be high, then the marketing loan benefits and countercyclical payments would be low as a consequence. In a high-priced baseline, these two important subsidy programs would have relatively small effects on the expected revenue from cotton compared with other crops, and therefore they would have relatively small effects on area planted and quantity produced. Cotton prices have moved up and down dramatically in recent years. Baseline (especially short-term) projections have also moved up and down. Expectations about prices over a longer horizon determine the expected impact of the subsidy programs in the future, and these projections are more stable.

A more inelastic demand function for cotton reduces price impacts from subsidy reductions. Econometric estimates typically find an inelastic demand for cotton, often in the minus range of -0.1 to -0.5 . Cotton comprises a relatively small share of the total retail cost of textile products, and these products comprise a relatively small share of consumer expenditures. Thus, income effects are likely to be small, and substitution away from cotton textiles by final consumers is unlikely to be significant. The significant issue for the elasticity of demand for cotton is the substitution between cotton and other fibers, especially synthetics, by textile manufacturers. The overall share of the fiber market taken by synthetics has grown slowly over time even as the real price of cotton has declined (Baffes 2004). Focusing on long-run effects of the cotton initiative, a demand elasticity nearing -1.0 might be expected. Such a demand elasticity may be appropriate for questions about the long-term price gains to be expected from removal of subsidies. For shorter-term effects, such as the immediate price impacts of subsidy reductions, a demand elasticity below -0.5 is more consistent with the econometric evidence as well as with evidence of large short-run price swings.

Three supply response parameters are important in considering the impacts of the cotton initiative on prices and welfare of LDC cotton producers. First, the supply responses to subsidy reduction (as well as to market price increases) in the EU and the United States will

determine the reductions in cotton production from removal of program benefits. Second, the supply response to higher market prices in the rest of the world will determine (along with the demand elasticity) how much the price can rise before market-clearing equilibrium is restored. Finally, the supply response in the LDCs indicates how much they will increase output in response to higher global prices. Given that these countries make up only a small share of the world cotton supply, their gain in total revenue and producer surplus (or net revenue) is greater the more elastic their supply.

Econometric estimates suggest quite inelastic values for all three sets of supply elasticities, but again there are reasons to believe that these estimates apply to relatively short-run analysis. Farmers adjust slowly to changes in relative net revenue and, given adjustment costs, they shift only partially unless relative price changes are expected to be permanent. The more the reductions in program benefits are expected to be permanent, and the more time that farmers, input suppliers, and marketers have to make adjustments, the larger the expected acreage shifts.

Estimated supply elasticities are small for the United States, but given that alternative crops are available in most cotton-growing regions, a substantial drop in cotton area would be expected in response to a permanent and expected reduction in subsidies. McDonald and Sumner (2003) also show how the estimated supply response elasticities, which apply to policy-constrained responses, are smaller than those applicable to the question of policy reform. In the European Union, the response may be even larger given the very high subsidy rates and the fact that cotton production initially expanded in response to the subsidies. In both cases, it may take a few years before the full adjustment is completed.

In other countries, supply responses to higher prices are likely more muted. First, land and other resource restraints often limit cotton expansion in well-established growing areas. For example, water concerns may limit cotton expansion in Australia and China. Second, some major growing areas are insulated from world price movements by domestic policy (for example, China, Uzbekistan, and countries in Africa), or infrastructure problems (for example, China, India, and especially countries in Africa). Overall, supply elasticities averaging 1.0 in the medium term may be reasonable in the United States, the EU, and Brazil, with elasticities more nearly in the range of 0.5 in poorer countries.

The effects of removing a given subsidy also depend on whether other farm programs are maintained or eliminated simultaneously with cotton subsidies. Given that the DDA cotton initiative has now been wrapped into the overall negotiations on agriculture, it is important to recognize that the supply response to reductions in cotton subsidies will be smaller when other subsidies are also reduced than if cotton subsidies alone were removed. Farmers compare expected net revenue from using land for the relevant competing crops. If program benefits from other crops are reduced at the same time cotton subsidies are reduced, relative impacts on net revenue are smaller than if cotton subsidies alone are removed. Recent research examining cotton liberalization has considered impacts of removing cotton subsidies alone, which was the relevant question in the WTO cotton case.

Sumner (2003) estimated that eliminating all U.S. cotton programs, while other farm programs remained in place, would reduce U.S. production by 25–30 percent, reduce U.S. exports by about 40 percent, and raise world prices by about 10 percent. These are averages of estimates that apply over a range of base periods and initial price assumptions. Under a longer-run scenario, with other program subsidies reduced at the same time as cotton subsidies are eliminated, then the effects on U.S. supply would likely be smaller, as would the resulting effects on world prices. However, adding the removal of EU programs would likely add another 2–3 percent to the overall world price effect of cotton subsidy removal. Weighing all the evidence from a variety of sources, a 10 percent increase in the world price of cotton is a reasonable estimate if the cotton subsidy programs were removed under the cotton initiative while other farm production subsidies were also reduced substantially.²

<<A>>Benefits of the Initiative for LDC Cotton Producers

The DDA cotton initiative includes proposals for elimination of subsidies and for compensation for losses incurred before their elimination. Given the background developed on the impacts of subsidies, consider now the potential benefits for least developed countries of this compensation as well as the elimination of the subsidies.

<>Compensation<<end>>

Clearly benefits of higher world prices that would follow from subsidy reductions benefit all cotton producers (and taxpayers in the EU and the United States). They also cost cotton users globally. Compensation is designed to offer LDC cotton producers and their rural economies benefits commensurate with what they would have received if subsidy reductions had proceeded more rapidly.

Direct financial contributions are not the way that the GATT or WTO normally deals with compensation for noncompliance. Traditionally, if a WTO member does not choose to implement a ruling, the offended member is allowed to “withdraw trade concessions” from the member that is out of compliance. There are instances of more direct compensation, and the concept is not inconsistent with WTO principles, but it simply has not been applied in a context similar to the cotton initiative. A recent report by International Lawyers and Economists Against Poverty (ILEAP 2004) provides detailed legal analysis of the prospects of direct financial compensation and finds that such a proposal, while unusual, is within the legal boundaries of WTO principles.

As the membership of the WTO has expanded, the use of the odd mechanism of withdrawing concessions is not only in conflict with the basic principles of the WTO, it is also simply not practical for many members. Exports from LDCs generally already face very low import duties in rich countries, and LDCs buy very little on a commercial basis. For an LDC such as Benin, for example, to raise its tariffs on imports from the United States would not only be self-defeating for Benin, it would also cause little or no notice in the United States and hence negligible pressure for the United States to come into compliance. In the absence of another feasible compensation mechanism, a direct financial transfer may be the only approach that actually provides some relief. It is also an approach that economists support on efficiency grounds.

The total amount of loss from the continuation of subsidies depends on the size of the estimated world price effects and the size of the estimated LDC supply response to these effects. These, in turn, depend on the length of run considered appropriate for the analysis. The argument for a short-run scenario is that these payments are meant to compensate for the failure to remove subsidies now, rather than for what world prices would be now if subsidies

had been removed many years ago and full adjustment had already taken place. A second issue is the revenue basis for the compensation criteria. The natural approach is to use estimates of forgone producer surplus or net revenue. But, since the subsidy effects reach beyond the farm to local input suppliers, forgone producer surplus would include local suppliers of farm inputs and marketing services (including local laborers). This concept of producer surplus would leave out suppliers of imported inputs and marketing services, because while these suppliers would benefit from subsidy reduction, they are likely to be associated with rich rather than poor countries. Goreux (2004) finds that the losses in poor countries from rich-country cotton subsidies are substantial, amounting to more than 10 percent of all the official development assistance to the four African countries that proposed the initiative.

A focus on LDC cotton producers suggests that production, not exports, should be the basis for compensation under the initiative. While producers in net importing nations would gain from higher prices, the textile industries in those countries, and presumably their workers, would lose. Thus the initiative has focused on exports or on production in countries that are net exporters. Goreux (2004) lists 22 LDCs that would be eligible for compensation based on their per capita incomes and their status as net cotton exporters. This later criterion leaves out Bangladesh, which is a significant cotton user in its textile industry and thus a net cotton importer. Based on 2001 and 2002 data, Goreux (2004) finds about 1.1 million tons of production in eligible countries and exports from these countries of about 0.8 million tons. It would be more now, as production has grown since 2002 in many LDCs.

For some sample calculations of the potential losses and compensation, let us use a world price increase of 10 percent and a supply elasticity of 0.5 for the relevant LDC recipient countries. Assuming a subsidy-suppressed base production of 1.2 million tons (continuing to leave aside production in Bangladesh) and applying an additional price of 10 percent on top of a subsidy-suppressed base price of \$1,100 a ton (\$0.50 a pound), the removal of subsidies adds \$132 million in revenue for the original production. In addition, production would expand by 5 percent (with an elasticity of supply of 0.5), and producers would gain one-half of this revenue, \$33 million, in surplus. The total annual gain from removing rich-country cotton subsidies is therefore approximately \$165 million, based on the price effect and supply

elasticity chosen for illustration. This amount would provide the basis for compensation. Goreux (2004) arrived at a figure of \$250 million, mainly because he assumed larger price increases as a result of the subsidy reduction.

Two points are striking about these figures. First, they are quite modest compared with the budget outlays of \$2.5 billion–\$5 billion that the United States and the European Union typically spend on cotton subsidies every year. Second, compensation is modest compared with the global effects of the subsidies. This latter result is a simple reflection of the facts that about half the production outside the United States and the European Union is in China and India, and that cotton production in LDC exporters is only about one-fourth of total production outside of the subsidizing countries. Thus many developing-country cotton farms who currently lose from rich-country subsidies would not receive compensation from the initiative and would therefore much prefer subsidy elimination.

The criteria for distributing the compensation are closely related to the criteria for determining its magnitude. Goreux (2004) considers distributing the compensation among countries on the basis of either cotton production or cotton exports. The distributions are very similar. In both cases Benin, Burkina Faso, and Mali would each receive between 15 and 20 percent of the compensation. Chad, Togo, and Sudan would each receive 7–8 percent, with the final 22 percent divided among the other 16 LDCs of Africa and Asia that export cotton.

The amount and national distribution of benefits is only part of the compensation story. The other issue is how poor farmers and other target groups actually benefit. Goreux (2003, 2004) and Baffes (2005) discuss how to ensure that compensation actually reaches intended recipients. The simplest way is to allow compensation to flow to the same beneficiaries as would higher cotton prices. Another approach would use the compensation fund to supplement the market price for cotton with payments on a per unit basis made through the normal marketing channels. Such an approach would mimic the impact of the price gains from subsidy removal around which the compensation idea was developed. This “second-best” offset would correct the original policy-induced price distortion and hence give LDC cotton farmers cotton price incentives that approximate those that would be achieved under full reform. The effective cotton price they faced would, in fact, be higher than if subsidies were removed, because other cotton-producing countries, such as China and Brazil,

would not face the higher effective prices and so would not increase production as they would if rich-country subsidies were removed.

It is important to remember that the Doha negotiations refer to the compensation issue as the “development” discussions. In this context, the emphasis seems to be on using compensation funds not to compensate cotton producers for their losses but to make investments in public goods, such as roads or other infrastructure developments, that benefit cotton farmers and their local communities. Such ideas have merit where investment funds or incentives for such projects are lacking. Such indirect compensation for growers means that those who have suffered direct losses will be less likely to see direct benefits. Such indirect compensation also suffers from the concern that development aid in general has not been effective in lifting the rural poor from poverty in these countries and that the new source of funds may contribute relatively little to the well-being of the cotton farmers in whose name the initiative is being pursued.

<>Trade Benefits<<end>>

As noted above, the global trade benefits exceed the gains to the LDC farmers by a substantial margin. But consider the trade benefits just to these same LDC farmers that are the focus of the cotton initiative, leaving aside the trade benefits to farmers in Brazil, China, and other major producing regions (and the benefits to taxpayers in rich countries).

Based on the discussion outlined above, the key determinants of trade benefits are the various supply and demand elasticities and the production-distorting degree of the policies being reformed. Benefits to LDC cotton producers from removing rich-country subsidies are larger the more inelastic is the demand for cotton; the larger is the rich-country supply response to subsidy reduction, which is composed of the supply elasticity and the degree of subsidy in the programs; the smaller is the supply elasticity in the nonsubsidized countries; and the larger is the supply elasticity in the LDC countries.

There are several issues to consider in negotiating cotton subsidy reforms. Given that the cotton initiative is now a part of the Doha agricultural negotiations, the achievements of the larger negotiations may be of vital importance, but this is not a necessary condition. If the cotton negotiations are conducted (in the recently organized subcommittee) separately from

the rest of the agricultural negotiations, then cotton subsidies could be eliminated even if relatively little else is achieved in the broader agricultural negotiations. But such an outcome seems unlikely. Much more likely is that the two negotiations will be closely linked, with the cotton agreement supplemental to whatever is achieved in the overall agricultural talks (which in turn depend on what is agreed in nonagricultural negotiations).

With the cotton initiative tied to the rest of the deal, cotton may be used as a leading edge that stimulates deeper subsidy cuts for other commodities than would otherwise occur. In that case, an adequate outcome for cotton would be achieved only if the subsidy reductions across all commodities were based on a solid starting point. Therefore, those urging cotton subsidy reductions have an incentive to achieve subsidy reductions across all commodities and then to push for additional or accelerated cotton subsidy reduction as a supplement to those established for other commodities.

The DDA agricultural negotiations are unlikely to eliminate trade-distorting agricultural subsidies, and some remaining support for cotton is also likely to continue at least for several years into the future. That means the cotton initiative proponents must consider what subsidy programs cause the most harm to the interests of LDC farmers per unit of political resistance in the United States and European Union.³

A focus on the most “coupled” subsidies is likely to get the most response in world markets and be resisted least by the U.S. and EU negotiators. However, the complexities of domestic farm programs for cotton illustrate a serious concern in using WTO negotiations to define reduction commitments for these programs. Several of the U.S. programs have been notified to the WTO as “minimally distorting” Green Box programs, while others have been notified as non-product-specific support. U.S. notifications of these programs were not challenged at the time they were submitted, and the mechanism for timely challenges does not seem to be well developed. (These notifications were implicitly challenged in the context of the WTO cotton dispute brought by Brazil, as discussed below.)

For the 2005 EU cotton policy, a focus on the most distorting programs suggests spending less effort to remove area payments but carefully monitoring the definitions so that area payments are truly neutral across crops (Karagiannis 2004). For the U.S. programs, simulations reported in Sumner (2003) and summarized by Goreux (2004) can provide

guidance. Sumner's table 1.4 shows that the Step 2 program, which is unique to cotton, has the largest projected impact on world price in the years 2004 to 2007, closely followed by the marketing loan program. The countercyclical payment program also has significant price impacts, as do crop insurance subsidies. The least impact on world prices, at about 1 percent, is from the direct payment program. A reasonable objective for a partial reform of U.S. cotton program might therefore be to press first for immediate elimination of the step 2 program. A second objective is a rapid and substantial reduction in the marketing loan subsidies by lowering the loan rate and changing the formula to raise the effective loan repayment rate. This is a natural agenda item for the overall DDA agricultural negotiations because the marketing loan program is also important for the other major supported crops. A third objective would be the reform of the countercyclical program to reduce the size of the payments by reducing the target price and removing remaining restrictions on land use. Even better would be a shift of the countercyclical program funds to the direct payment program and elimination of the payments tied to the price of the specific commodity. Finally, crop insurance subsidies could be reduced by reducing premium subsidies and shifting to whole farm insurance with area-wide triggers and reduced repayment of program losses.

Any reasonable negotiation strategy must take into consideration the results achieved under the cotton dispute brought by Brazil against U.S. upland cotton programs. The WTO cotton panel ruled largely in favor of Brazil's position, and this ruling was upheld by the appellate body (WTO 2004c; WTO 2005b; Baffes 2005; Schnepf 2004). The final WTO ruling is available to provide context for the DDA negotiations and especially the cotton initiative subcommittee negotiations, allowing them to be used as a starting point for further efforts. Implementation of the cotton policy adjustments under the ruling is a much larger concern, however, It is unlikely to begin before late 2005, and full implementation that satisfies Brazil and other cotton producers is uncertain and is likely to entail additional negotiations.

The WTO ruled that the Step 2 export program and the export credit guarantees for cotton (and some other commodities) were prohibited export subsidies, and that the Step 2 domestic program was a prohibited domestic-content subsidy. These cotton programs were then listed for early elimination—within months of the final ruling. Clearly, if the United

States indicates that it will comply with the ruling and eliminate the prohibited subsidies, there is no reason to target the Step 2 program or export credit guarantees for vigorous negotiation in the DDA cotton initiative. The United States has already signaled a willingness to negotiate removal of the subsidy elements of the export credit guarantee program in the DDA, so this program, in particular, seems likely to be reformed. The cotton initiative could aid in the rapid reform of these “prohibited” programs by reinforcing the extreme pressure the United States would face if it fails to comply fully with the dispute resolution results.

A second major set of findings of the cotton dispute is that none of the U.S. domestic support programs for cotton properly belonged in the Green Box of minimally trade-distorting programs. In particular, the direct payment program, by prohibiting production of fruits and vegetables on base land eligible for payments, more than minimally restricted the use of the cotton base area and thereby likely stimulated cotton production, the WTO panel ruled. These rulings suggest that the WTO interpreted the Green Box more narrowly than the United States had done in its notifications under the Uruguay Round. These rulings have implications for compliance with constraints on aggregate measures of support, even without tightening the definitions that have been proposed for the DDA. Thus the DDA and the cotton initiative could take this ruling as a starting point for tightening definitions and categories surrounding classification of subsidy programs.

Third, the WTO cotton panel found the Step 2 programs, the marketing loan program, and the countercyclical program all caused serious prejudice to Brazil’s interests by depressing and suppressing the world price of cotton. The WTO panel did not specify a quantitative threshold that the effects of these programs exceeded. However, the panel did find, and the appellate body confirmed, that the United States was required to withdraw the programs or at least remove the significant price suppression that they cause. This finding not only reinforces the claims that motivated the cotton initiative but also makes it more difficult for the United States to argue, for example, that the countercyclical program should be placed in an enhanced Blue Box and secured from meaningful DDA disciplines.

Overall, if the United States implements the ruling in a timely and forthright manner, the WTO cotton dispute will have achieved much of what the cotton initiative is seeking from the United States, except compensation during the implementation process. The

other value of the WTO cotton dispute is to place additional pressure on the EU to commit to adjustments to its cotton program.

The separation of the compensation or development aid and subsidy reduction elements of the initiative during the negotiation process does not preclude linkage in the final stages of a deal. This is clearly defined in the original proposal. The danger is that compensation does not provide significant incentives for large and rapid subsidy reductions. Under any reasonable estimate, the amount of compensation is small relative to the outlays that the European Union and the United States are already spending for cotton subsidy programs. It may be more feasible politically to reduce subsidies by less and compensate more. For example, in the United States where the cotton subsidy program has routinely cost \$2 billion and more a year, the farm lobby may consider adding another \$100 million or \$200 million in order to maintain the subsidy as simply a cost of doing business. Then, with LDCs legitimately satisfied by compensation, the cotton programs would be free of that additional pressure to reform. This would leave other developing-country cotton producers, including Brazil, China, and India, with no benefit from the initiative and a smaller coalition to press for real reforms.

<<A>>Final Words<<end>>

The DDA cotton initiative has the potential to put additional pressure on the United States and the European Union to reduce cotton subsidy programs further and more rapidly than they reduce subsidies for other commodities. Most of that incentive derives from unwelcome global attention and scrutiny from other WTO members. The most important leverage is the link between the cotton initiative and success of the DDA as a whole as well as the willingness of members to offer trade liberalization measures that are high on the agendas of the EU and the United States. If the United States complies expeditiously with the WTO cotton dispute, many of the trade objectives of the cotton initiative will be satisfied. The two approaches to trade policy reform (complying with the panel ruling or multilateral negotiation) are partial substitutes. Nonetheless, given the uncertainty associated with the U.S. response to the dispute settlement case, continuing a vigorous pursuit of the cotton initiative makes sense for developing countries.

The DDA cotton initiative is likely to result in compensation that can provide significant benefits to LDC cotton producers, if handled carefully. The appropriate amount of compensation is likely in the range of \$120 million–\$240 million a year based on the world price–suppressing effects of U.S. and EU subsidies. As the subsidies are partially reformed, the compensation rate would decline. The form of the compensation affects the within-country distributions as well as the effects on cotton markets. The most natural compensation scheme would be to distribute funds in a way that mimics the effects of higher prices. This could be done with a direct payment per unit of production at the same rate as the estimated price suppression caused by the subsidies. The benefits would flow through the system precisely as would the benefits of higher market prices, and producers would not see any difference. The alternative of broad development assistance may be appropriate on its own merits. However, development project funding, even for projects tied to cotton productivity, cannot mimic the effects of higher prices in the way that adding the compensation to the market returns would.

As with the WTO cotton dispute, the cotton initiative may also be used to stimulate more, rather than less, policy reform in the DDA for the rest of the farm commodities. For this to occur, it is important that cotton not drain negotiating resources and incentives from the rest of the negotiations. Less than complete elimination of cotton subsidies or a slower path of cotton policy reform might be exchanged for substantially more in the rest of the negotiation. Such a deal could improve LDC welfare more than demanding complete acquiescence to the goals of the cotton initiative.

Finally, even if the cotton initiative achieves significant success, the result will not be the end of rural poverty even in cotton-producing regions. An extra \$110 per metric ton of cotton, or \$200 million a year is important, but many more investments and institutional changes will be required for rural economic development to be successful.

<<A>>Endnotes<<end>>

1. Other policies also affect cotton, such as irrigation water subsidies in Arizona and California. These policies are less important to stimulating cotton production nationwide, and they apply not only to cotton but to all crops and to pasture grown in the affected regions.

2. For an estimate of the impact on cotton if all merchandise trade distortions were removed, see Anderson, Martin, and van der Mensbrugghe (2005).

3. For a discussion of negotiating efforts on domestic support in this spirit, see Sumner (2000).

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