APPENDIX I: COTTON SECTOR REFORMS: AN UNFINISHED STORY

Cotton is critical to the economic development of several countries in West Africa (Benin, Burkina Faso, Chad, Mali) and East Africa (Mozambique, Tanzania, Zambia, Zimbabwe). It is often considered a success story because between 1980 and 2000, while Africa's share of world agricultural trade fell by half, its share of world cotton trade rose by 30 percent, and cotton production was able to contribute significantly to poverty reduction in some countries, such as Burkina Faso. This was mainly because cotton is predominantly a smallholder crop. Over 2 million poor rural households in Africa depend on it as their main source of cash income (Tschirley and others 2006a). Cotton cultivation has also made possible growth in infrastructure and greater satisfaction of basic needs such as health and education in some countries. However, dependence on a single export crop has also made smallholders in many countries vulnerable to world prices.

Before the adjustment era, the marketing and trade of cotton in most African countries was handled by parastatals, which in several cases also met the input and credit needs of the farmers. The Bank has provided considerable support for cotton sector reform in the Region for the past 10 years. Though the specific reforms undertaken have varied according to country circumstances, the broad goals of the reforms have been similar: to improve the efficiency and competitiveness of the sector.

In several countries the Bank has provided support for privatization of the parastatals, linking producer prices to world markets, ginnery rehabilitation, improving grading practices, research in and adoption of new varieties of cotton, and strengthening the capacity of producer organizations to play an increasing role in management of the cotton sector, among other reforms.

The cotton reform story is unusually complex, because neither the Bank nor its clients in Africa are in a position to influence cotton-production subsidies in the United States and other developed countries. The subsidies in the developed countries have increased production and consequently depressed world market prices. Whether the removal of subsidies would actually lead to higher world prices for cotton is debatable (since U.S. exports would likely be replaced by those of higher-cost producers), but research points to considerable revenue forgone by African countries because of these subsidies (World Bank 2006e). In addition, pest management techniques and technology improvements that contributed to increased yields have reduced production costs in major world producers such as the Brazil, China, and the United States, making it difficult for African countries to compete.

It is difficult to draw conclusions about the outcome of Bank interventions, partly because it is difficult to trace causality. Also, reforms have been implemented at differing paces and to different degrees across countries. For example, in Zambia the government completely liberalized the cotton sector, whereas in Mali the privatization of the main parastatal has not yet taken place. Though there have been organizational differences in structure and pricing policies in the cotton industry among the various countries, there have been common technical challenges in maintaining quantity and quality of production in the face of declining and highly volatile world prices. While in some countries, such as Burkina Faso, organizations of producers have taken on major responsibility for a growing number of functions in the sector, this has not happened across countries. Some gains that have followed the reform period include a higher percentage of market prices for farmers, more timely payments, and reduced pressures on state budgets. However, with the privatization of the parastatals, the private sector has not stepped in to fill the gap left in the supply of inputs and credits.

The cotton sector faces the same constraints as other crops do because of the reform process: lack of access to inputs (fertilizers, pesticides, seeds), extension, and credit. The Bank's approach to cotton sector reform in Africa does not show adequate recognition of how the sector had been insulated from some of these problems because of the special role played by parastatals in input supply and credit access. Data show that cotton yields have stagnated in most countries—including Benin, Burkina Faso, Chad, and Tanzania. Lack of inputs and declining soil fertility (particularly because in several countries expanded output under cotton production resulted from increasingly marginal areas being brought under cultivation for the crop) remain major concerns. Tschirley and others (2006a) also note nine technical challenges the sector faces (box I.1). The Bank is now at a crossroads. Given its long-term involvement in the sector, other donors and clients are looking to the Bank for advice in how to move forward.

Despite its long involvement in the sector, the Bank has not—until very recently (and ongoing)—attempted to undertake rigorous analytical work that identifies the multiple constraints to development in the cotton sector and lessons of experience across the Region to inform its policy dialogue with the clients.

Box I.1: Technical Challenges in the Cotton Sector

- **Support strong varietal research and dissemination.** Seed quality has major impacts on yields, ginning ratios, and fiber characteristics. It thus establishes the outer limits of productivity and quality throughout the system.
- **Maintain the purity of varieties once they are released.** This typically requires varietal zoning agreements, which demand some level of horizontal coordination among players.
- **Assure sufficient and timely provision of treated seed to farmers.** Treated seed reduces disease in a very cost-effective manner.
- **Ensure sufficient and timely provision of appropriate pesticides to farmers.** Most cotton varieties currently in use in Africa are highly susceptible to attack by pests, so that in many areas three to five pesticide applications are considered necessary for economical yields.
- **Manage pesticide use to reduce cost and avoid insect resistance.** The "pesticide treadmill"—inappropriate use of chemicals that increases insect resistance, leading to more use—increases financial costs and both environmental and human health externalities.
- **Manage pesticide use to reduce damage to human health and the environment.** This issue has received very little attention to date, and is becoming increasingly important within several francophone systems. Maumbe and Swinton (2003) note the significant health costs incurred by pesticide-using cotton farmers in Zimbabwe.
- **Ensure appropriate use of fertilizers.** High cost of fertilizers and varieties that do not respond well to fertilizer means that this input is often not profitable for cotton in Africa. Wider use, which may be a prerequisite for cotton to make major and sustainable contributions to poverty reduction, requires reducing its cost and combining it with improved varieties that are more responsive to fertilizer.
- **Control quality from the farm gate through the export of fiber.** Quality relates to fiber characteristics and to the uniformity of these characteristics in any given export lot. Countries with a reputation for high and uniform quality will have a ready market and better prices for their output, even during the periodic gluts that afflict the world cotton market.
- **Pay farmers sufficiently remunerative prices to ensure their continued and increasing participation in the sector.**

Source: Tschirley and others 2006a.