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Discover Natural Fibres Initiative

Identity Cottons[1]

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Introduction

Over the last decade, due to increased global awareness about rural poverty, climate change and sustainability, and an extended period of fast growth in income per capita, projects to improve agricultural practices in developing countries as well as the level of social and environmental responsibility in developed countries have mushroomed. In the cotton sector, four major initiatives are organic cotton, Fairtrade cotton, Cotton made in Africa, and the Better Cotton Initiative.[3] This article reviews each identity cotton, draws comparisons, and comments on the challenges faced by these initiatives.

Organic Cotton

According to the Textile Exchange (formerly the Organic Exchange), "the term organic describes a method of farming without the use of toxic and persistent pesticides or fertilizers, sewage sludge, irradiation or genetic engineering, and certified by an accredited independent organization. It is a system of farming that strives for a balance with nature, using methods and materials that are of low impact to the environment."

Currently, a number of countries have issued government standards for organic farming production: the United States (USDA National Organic Program), Canada (Canada Organic Regime), the European Union (Nr. 834/2007), Japan (JAS), Australia (Australian Certified Organic), and India (India Organic - National Programme for Organic Production).

The organic fiber must be segregated, labeled and processed on a cleaned out or dedicated line that is physically isolated. The processor must have a system in place to track the organic fiber as it moves through production. The cost of certification is usually born by the company that is being certified (such as a spinner or a fabric mill). The company contracts directly with a certification body and makes all arrangements to become certified. In some cases a brand or retailer may offer to pay for the certification costs of one or more suppliers.

The general steps to obtain organic certification for cotton are:

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[3] Other initiatives such as Biodynamic cotton in Egypt, Agroecological cotton in Brazil, or the Sustainable Cotton Project in California are of limited scope and therefore not included in this report. The following institutions are implementing partners of some of the initiatives reported in this study, but are not themselves cotton initiatives: the Interchurch Organization for Development Cooperation (ICCO), CottonConnect, HELVETAS Swiss Intercooperation, the Sustainable Trade Initiative (IDH), and Solidaridad.

- Submit an application to an accredited independent third party certifier[4]
- Develop a farm plan for ecosystem management
- Develop an internal control system, including record keeping
- Pass annual inspections by certifier
- Go through a transition period of 2-3 years depending on the standards (during this period, cotton is called "Organic-in-conversion")

Table 1 summarizes the differences between organic and conventional cotton farming systems. It must be noted, however, that fiber properties of organic cotton are the same as those of conventional cotton grown in the same geographical region. Furthermore, in order for a product to be labeled as produced from organic cotton, cotton produced "organically" requires a certification valid for the country where the product is to be sold. The certification is obtained from one of various accredited independent organization.

Table 1. Differences between the Organic and the Conventional Cotton Farming System

	Conventional Cotton	Organic Cotton
Biotech Seeds	Allowed	Not allowed
Seed Preparation	Treatments with fungicides and insecticides allowed	No chemical treatment allowed
Fertilizer	Synthetic fertilizer allowed	Uses organic manure as fertilizer
Crop rotation	No restriction	Rotating crops must be grown organically
Irrigation	All methods allowed	Encourages lower water use
Weed Control	Chemical weed control allowed	Non-chemical control of weeds
Pest Control	Pesticides, including insecticides allowed	Organic insecticides and biological control
Harvesting	Growth regulators, desiccants, and defoliants allowed	Growth regulators, desiccants, and defoliants not allowed

The Textile Exchange is a non-profit organization headquartered in the United States which developed two global organic cotton standards, the Organic Exchange (OE) 100 Standard and the OE Blended Standard. The OE standards are chain-of-custody standards that give third party verification to a final product containing a given amount of organically grown cotton. The OE 100 and OE Blended are voluntary standards and do not address the use of chemicals or any other aspects of production beyond the integrity of the organic fiber. The OE 100 Standard certifies that products made with 100% organic fiber have been tracked through the production chain and segregated to prevent commingling with other fibers. The OE 100 tracks the purchase, handling, and use of 100% certified organic cotton fiber in yarns, fabrics and finished goods through the use of transaction certificates. The OE Blended Standard applies to all goods that contain a minimum of 5% organic cotton and can be used for blends that contain any fiber. The Textile Exchange is funded mainly through foundations and corporations, and also supported by membership fees, conference revenue and, and other serviced-based fees.

[4] A non-exhaustive list of Certificating Agencies is: Associazione Suolo e Salute, Instituto Mediterraneo di Certificazione (IMC), and Instituto per la Certificazione Etica e Ambientale (ICEA) from Italy; Ecocert, and Qualité-France SA, from France; Institute for Marketology (IMO), and ProCert Safety from Switzerland; Naturland-Verband, BCS Öko-Garantie GmbH, and Demeter-International e.V. from Germany; Center for Organic Agriculture in Egypt (COAE), and Egyptian Center of Organic Agriculture (ECOA); Soil Association Certification Ltd from the UK; Indian Organic Certification Agency (Indocert); AGRIOR Ltd from Israel; Control Union Certifications from the Netherlands; Africert Ltd, and EnCert Ltd in Kenya; BDOCA from South Africa; Debio from Norway; and TanCert from Tanzania.

The International Working Group on Global Organic Textile Standard has developed other standards to address ecological and social responsibility issues in the processing of organic fibers. The Global Organic Textile Standard (GOTS) is based on chemical use, water treatment, and environmental policy, as well as on International Labour Organization (ILO) norms for organic textile fibers (including cotton) after the farm gate. GOTS is a voluntary processing standard developed to bring global uniformity to sustainable textile processing (users of GOTS must discontinue the use of own standards). According to GOTS, a “made with organic materials” must have a minimum of 70% of organic fibers, while a textile product labeled “organic” must have a minimum of 95% of organic fibers.

The chain-of-custody tracking system for the OE Standards and the GOTS is based on transaction certificates, i.e. the reconciliation of purchase and sales volumes of organic cotton and textiles (mass balance calculation) and tracing back if all the purchased products with certification claim are indeed correctly certified. However, annual on-site inspection of the processor’s, manufacturer’s and trader's premises tracing the organic fiber product flow (for OE Standards and GOTS), assessing all inputs and accessories used, verifying the waste water treatment system, monitoring minimum social criteria and implementing risk-assessment-based residue policy (for GOTS) are performed by independent and specially accredited certification bodies.

India is the only country to have introduced a national standard for organic textiles. On July 30th 2012, the Indian Standards for Organic Textiles (ISOT) was formally launched, and it is expected to become mandatory for all organic textiles being processed in India. The standard was developed with the goal to ensure the integrity for Indian organic textiles from cultivation up to labeling and distribution. If exporters are expected to comply with existing private standards such as GOTS and the OE standards along with the IOTS, it will inevitably escalate the cost of textile certification (Textile Exchange 2012).

Figure 1. Labels for Organic Cotton

In 2009/10, organic cotton was grown in 23 countries by about 275,300 farmers on 461,000 hectares, with the major producers being India (195,412 tons), Syria (20,000 tons), Turkey (11,599 tons), China (4,300 tons), the United States (2,808 tons), Tanzania (2,635 tons), Uganda (1,550 tons), and Peru (831 tons) (Textile Exchange 2010). World organic cotton production amounted to 241,697 tons in 2009/10, 38% higher than in 2008/09. However, organic cotton production dropped by 37% to 151,079 tons in 2010/11, driven by a 30% decline in area to 324,577 hectares (Chaudhry and Truscott 2012). India, Syria, China, Turkey, and the United States still were the top five producers in 2010/11. Production in India fell by 48% from 195,412 tons to 102,452 tons due to a more stringent regulatory control by the Agricultural and Processed Food Products Export Development Authority (APEDA). Twelve out of 20 countries increased production (most significantly Benin, Brazil, Mali, Nicaragua, Kyrgyzstan and Tajikistan). World production of organic cotton lint was projected at 143,600 tons for 2011/12. Organic cotton represents less than 1% of global cotton production.

Organic cotton production tends to be more 'profitable' for the small scale farmer situated in a developing country – even if lower yields are reported – because of the lower cost of inputs and/or an organic 'premium' being paid (Textile Exchange 2011). This tends to be particularly true for farmers in less favorable growing conditions such as dry and drought-prone environments, where the baseline yield is lower than the yield obtained organically.

The extent of the organic cotton market is limited by the availability of fiber and the labeling costs throughout the supply chain on the supply side, and by competition with other fibers advertised as "green fibers", "environmentally friendly" or "sustainable" fibers, such as recycled polyester or fibers made out of recycled plastic bottles. Furthermore, promotional efforts and disposable income are critical variables in determining the size of the organic cotton market.

Organic cotton is not contracted, i.e. cotton farmers gain access to the market for organic products by obtaining the organic certification, but there is no guarantee that they will actually be able to sell their organic cotton and receive a price premium over conventional cotton. The fact that a significant number of organic cotton farmers had difficulties selling their cotton at a premium contributed to the decline in organic area. In 2011/12, the average premium paid for organic cotton over conventional cotton of similar quality amounted to 25-50 cents per pound, although quotations were much higher.

In Japan, about 1,700 tons of organic cotton from India, Turkey, and the USA are processed annually into textile products for the Japanese market and also for export. Up to 2010/11, Japanese textile mills would pay 5-10 cents per pound premium over upland cotton for organic cotton from India, and 20-30 cents per pound premium for organic cotton from Turkey (mainly Izmir origin). However, the export ban in India in 2010/11 triggered higher premiums in the order of 88 to 103 cents per pound over upland cotton, along with increased procurement difficulties. The premium for organic cotton from Turkey also increased in 2010/11 to 90-95 cents per pound. The resulting effect was a significant decline in mill use of organic cotton in Japan, to less than 1,000 tons during that season.

Fairtrade Cotton

Fairtrade (FT) is promoted as an alternative approach to conventional trade and is based on a partnership between producers and consumers.[5] FT is intended to offer producers a better deal and improved terms of trade, and consumers a way to reduce poverty through their every day shopping.[6]

FT cotton production was launched in Cameroon and Burkina Faso during 2004-05, and reached the shelves of fashion stores in Europe in March 2005. FT cotton is now also produced in India, Mali, Senegal, Brazil, Kirghizstan, and Egypt, with new producers from Uganda also gaining certification in 2011/12 (Sanfilippo 2012). FT cotton producers are usually small family farms organized in cooperatives or associations which farmers own and govern democratically. The only exception occurs in India and Pakistan, where some cotton producing communities are not organized in cooperatives, but are selling to a Promoting Body, which is responsible for passing back to the individual farmers the extra benefits generated by FT sales.

[5] Fairtrade is often confused with fair trade (two words) and ethical sourcing. The generic term fair trade has been used for many years and is used by many companies to define their way of working with suppliers and producers. Ethical trading companies such as People Tree, Gossypium and Bishopston guarantee that their products are sourced ethically. The FT Mark signals that the product has been sourced using FT cotton from a certified producer from a transparent supply chain.

[6] Source: http://www.fairtrade.net/cotton.html

Similarly to the organic cotton program described in the previous section, FT cotton does not guarantee that cotton growers will actually be able to sell their production. However, FT does guarantee a minimum price and a FT premium if certified cotton is sold.

In 2011, the umbrella organization for all Fairtrade labeling initiatives throughout the world, Fairtrade Labelling Organization International (FLO), shortened its name to Fairtrade International (although the acronym FLO remained unchanged). All the former Certification Marks in various countries have been replaced by the harmonized international Fairtrade Certification Mark with the exception of the United States where Fairtrade International's member (namely Transfair USA) maintained its historic label. Following the resignation of Transfair USA from its international membership as of January 2012, the international Fairtrade "certified cotton" Mark[7] is now also available in the US market.

FLO is a non-profit, multi stakeholder body that is responsible for the strategic direction of FT, sets FT standards and supports producers. FLO-CERT is an independent certification company, owned by FLO. FLO-CERT inspects producers and traders to ensure they comply with FT standards. Fairtrade Labelling Initiatives (FLIs) are national organizations that market FT in their country. There are currently 19 FLIs covering 24 countries in Europe, North America, Japan, Australia, South Africa, and New Zealand. These organizations also license companies to use the FT Mark on products in their country. Fairtrade Marketing Organizations (FMOs) are national organizations that market and promote FT in their country, similar to FLIs. FLO directly licenses companies in these countries to use the FT Certification Mark. There are currently 3 FMOs, in Korea, Hong Kong, and the Czech Republic.[8] Fairtrade Producer Networks (FPNs) are associations that FT certified producer groups may join. There are currently three FPNs, representing producers in Africa, Asia and Latin America and the Caribbean. Through these networks, FT producers can influence decisions that affect their future.

FLO members meet once a year at the General Assembly. The Assembly decides on membership issues, approves the annual accounts, and ratifies new Board directors. There are also annual assemblies for the FLIs and for the FPNs. There are about 70 members of FLO staff at FLO offices in Bonn, Germany, plus a team of Liaison Officers who work around the world.

In 2011, producers became half-owners of the certification and labeling scheme, making Fairtrade's ownership model unique. Fairtrade Producer Networks, representing the 1.15 million certified producers and workers in Asia, Africa, and Latin America (60,000 of which are cotton farmers), now account for 50% of all delegates on the System's general assembly. Producers own half of Fairtrade International, the standards, and the Fairtrade Mark (Sanfilippo 2012).

Figure 2. Fairtrade Certification Mark

[7] The Fairtrade "certified cotton" Mark is called the Fairtrade Mark or Fairtrade Certification Mark with its "certified cotton" variation, it is a registered mark, certification is made by a third-party and it is IOS65 accredited.
[8] Mexico is an FMO-Associate Member.

The FT system is funded through license fees paid by brands and retailers who use the FT mark and by grants, on a 50%-50% basis. Grants come from various donors, private or public, and can be restricted or unrestricted. FLO does not receive government support. Some FLIs may receive government support through international cooperation programs associated with specific projects (such as impact assessment studies or public awareness campaigns), but no centralized data is available since the FLIs are independent organizations. FLO is actually owned by FLIs and FPNs (Sanfilippo 2011).

By selling to the FT market, cotton farmers receive: (1) a minimum price which covers the costs of sustainable production, and (2) a FT Premium which allows them to invest in community projects, such as schools, roads or health care facilities. In the case of contract production (in India and Pakistan), the FT minimum price is the minimum price paid to the promoting body. The promoting body can deduct Direct FT Costs up to a maximum amount of euro 0.04 per kg from the minimum price or market price, and pay at least the remaining amount to the individual farmers. Payment must be made upon receipt of the product. For contracts involving FT payers, producers and conveyors, conveyors must pay producers no later than 15 days after receipt of the payment from the FT payer.

The FT minimum prices for cotton are set at different levels depending on the producing region (see Table 2), and if the market price is higher than the FT minimum price, the market price applies. Additionally, pre-export lines of credit are given to the producer organizations if requested, of up to 60 % of the purchase price.

Table 2. FT Minimum Price and Premium per Kilogram of Seed Cotton (Sanfilippo 2012).

Regions		FTMP (€/kg) 2008-2011	FTMP (€/kg) from 2011-12	*Change*	FT Premium (€/kg) (unchanged)
South and Central America	*G. barbadense*	0.45	0.49	*+ 9%*	0.05
	G. barbadense organic	0.54	0.59	*+ 9%*	0.05
	G. hirsutum	0.41	0.41	-	0.05
	G. hirsutum organic	0.49	0.49	-	0.05
Eastern Africa	*G. hirsutum*	0.36	0.40	*+ 11%*	0.05
	G. hirsutum organic	0.43	0.48	*+ 12%*	0.05
Kyrgystan	*G. hirsutum*	0.46	0.46	-	0.05
	G. hirsutum organic	0.55	0.55	-	0.05
West and Central Africa	*G. hirsutum*	0.42	0.42	-	0.05
	G. hirsutum organic	0.50	0.50	-	0.05
North Africa	*G. barbadense*	0.43	0.48	*+ 12%*	0.05
	G. barbadense organic	0.52	0.58	*+ 12%*	0.05
	G. hirsutum	0.39	0.40	*+ 3%*	0.05
	G. hirsutum organic	0.47	0.48	*+ 2%*	0.05
South Asia	*G. barbadense*	0.45	0.53	*+ 18%*	0.05
	G. barbadense organic	0.54	0.64	*+ 19%*	0.05
	G. hirsutum > 25 mm	0.38	0.44	*+ 16%*	0.05
	G. hirsutum < 24.5 mm	0.38	0.39	*+ 3%*	0.05
	G. hirsutum organic > 25 mm	0.46	0.53	*+ 15%*	0.05
	G. hirsutum organic < 24.5 mm	0.46	0.47	*+ 2%*	0.05

FTMP: Fairtrade Minimum Price
FT Premium: Fairtrade Premium

Small producer organizations are increasingly choosing to invest their FT premium in the development of their businesses, for example through processing, quality improvements, and sustainable resource management. Cotton farmers in India are increasingly choosing to invest their FT premium in drip irrigation. Farmers in West Africa often invest in soil management or soil erosion control projects.

In cotton production, women account for 18% of certified farmers and they receive their own income from cotton directly and no longer through their male relatives. In addition to the increased financial independence this gives to women, it also benefits communities as women tend to invest more within the household, on children's education for example.

All cotton in FT cotton products must be sourced originally from certified producers. Where there is insufficient availability of FT cotton combers, it is permitted to use up to 20% non-FT cotton, provided that the manufacturer subsequently purchases an equivalent volume of FT cotton and uses it in the manufacture of a non-FT product. Any such substitution must be clearly reported in the quarterly flow of goods report.

FT maintains environmental standards based on the international recommendations of the UN Environment Programme, such as the strict control of chemicals and reductions in pesticides on the Pesticide Action Network's Dirty Dozen list. FT also encourages sustainable farming so farmers establish their own environmental development plans to ensure that where possible, waste is managed, materials are recycled, and steps are taken to avoid soil erosion and water pollution. Biotech seeds are also forbidden. FT cotton can also be organic. Minimum prices for jointly certified FT and organic cotton are set about 20% higher than for certified FT cotton.[9]

FLO introduced physical traceability as a requirement for FT certified producers, traders and licensees in the February 2009 Generic Trade Standard (GTS). Before this, traceability was implicit in the FT Standards and FLO-CERT reviewed documentation to track volumes of FT products through the supply chain. Physical traceability means that FT products must be marked and kept separate from non-FT products at each stage of production and processing. Producers and traders have to comply with these requirements since May 2011.

Every operator in the supply chain that takes ownership of FT cotton and uses it in the processing and/or manufacturing of FT products until the point of licensing must demonstrate efforts to comply with the following ILO Conventions before it can be approved by the certification body to start processing and/or manufacturing FT cotton:

- 001 Hours of work [1919]
- 029 Forced Labor [1930]
- 087 Freedom of Association and Protection of the Right to Organize [1948]
- 098 Right to Organize and Collective Bargaining [1949]
- 100 Equal remuneration [1951]
- 105 Abolition of Forced Labor [1957]
- 111 Discrimination (Employment and Occupation) [1958]
- 131 Minimum wage fixing [1970]
- 138 Minimum Age Convention [1973]
- 155 Occupational Safety and Health [1981]
- 182 Elimination of the Worst Forms of Child Labor [1999]

Where the operator is using a sub-contractor for processing and/or manufacturing of cotton products (including ginning, spinning, weaving, knitting, laundry, dyeing and/or embellishment), the operator must demonstrate how the sub-contractor has made progress towards compliance with the ILO conventions listed above before the sub-contractor can be approved by the certification body to start processing and/or manufacturing FT cotton. The operator must re-submit its demonstration of efforts every two years.

Certified FT cotton production grew by 22% in 2011/12 to 24,500 tons of lint (63,000 tons of seedcotton), over 60% being also certified organic (Sanfilippo 2012). The estimated Fairtrade

[9] Source: http://www.fairtrade.org.uk/products/cotton/questions_answers.aspx

Premium paid to cotton producers in 2011 amounted to euro 1.1 million (FLO 2012). However, only 8,233 tons of cotton lint equivalent were sold as certified FT textile goods in 2011, 19% of them being also certified organic (FLO 2012). The other two-thirds of cotton lint produced under the FT program was either sold under FT terms but ended up in uncertified textile goods, or outside FT terms as non-FT cotton. No estimate of the amount of cotton produced under the FT program sold as non-FT is available.[10]

In 2011, 97% of Fairtrade cotton was produced in India, Cameroon and Burkina Faso (FLO 2012). Leading markets for FT cotton continue to be the United Kingdom ahead of France, Germany, Switzerland, the Netherlands, and Finland (Sanfilippo 2012).

Figure 3. Certified Fairtrade Cotton Lint Production. (Source: Sanfilippo 2012)

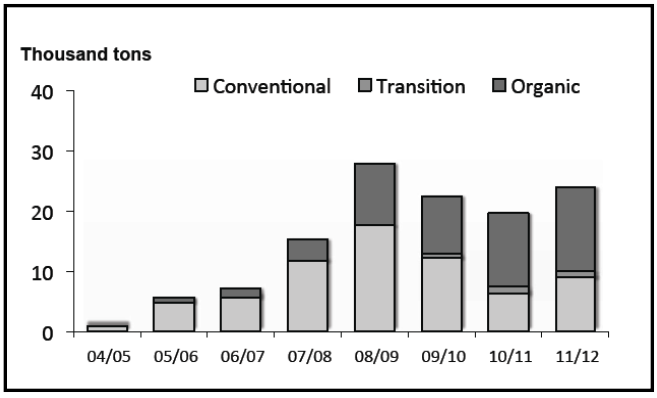
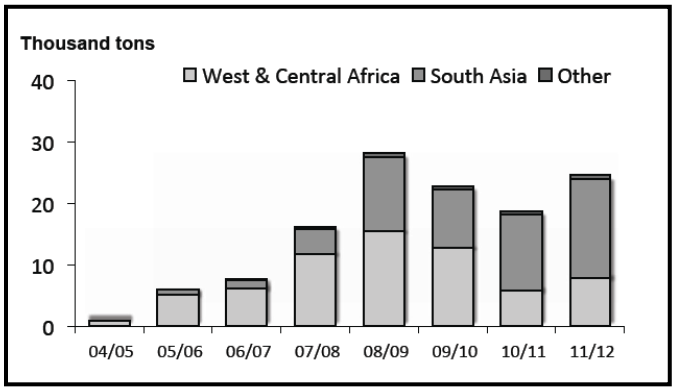


Figure 4. Certified Fairtrade Cotton Lint Production by Region. (Source: Sanfilippo 2012)



Fairtrade reports up to 2010-11 measured sales of cotton textile goods in terms of number of items sold bearing the Fairtrade "certified cotton" Mark, as opposed to cotton equivalent tons used in the 2011-12 report. So it is not possible to compare sales in 2011 with previous years' sales. Sales declined from 27.6 million items sold in 2008 (almost double the sales of 2007) to 23.4 million items sold in 2009, before increasing to 24.8 million in 2010 (FLO 2009, 2011). The share of certified organic cotton in FT certified cotton sales increased from 8% in 2008 to 18% in 2010 (FLO 2009, 2011). It must be noted that while at the production level up to 60% of FT cotton is produced organically, only less than 20% of FT cotton products are organic.

[10] Personal communication with Damien Sanfilippo on 9/24/2012.

The latest information regarding the number of smallholders in cotton production under the FT program is from 2009/10, when they amounted to 85,000 worldwide. In the previous season, they amounted to 93,000 (Sanfilippo 2010, 2011).

After its beginnings pursuing niche market demands from developed countries, FLO is developing a cotton model to introduce FT cotton goods into large mainstream markets. A supply chain management and support service has been created within FLO, which will progressively facilitate the creation and strengthening of committed and cost-effective supply chains. Projected activities include research and consultation on the cost of production of lint, micro-financing, and technical and business training.

Cotton Made in Africa

Cotton made in Africa (CmiA) is a multi-stakeholder initiative driven by the Aid by Trade Foundation (AbTF), aiming at improving the socio-economic and environmental living conditions (livelihoods) of smallholder cotton farmers in sub-Saharan African (Kaut 2012). CmiA promotes:
• Higher income through higher productivity and improved cotton quality and better access to sales markets;
• Better working conditions through decent work on farms and in ginneries;
• Better environmental performance through optimum application of pesticides, reduction of greenhouse gases, and sound water management.

The target population of cotton growers is small scale farmers in Africa that produce cotton in rain-fed areas and under crop rotation schemes with basic food crops. CmiA intends to promote sustainable[11] cotton growing by specifying, measuring and monitoring indicators for the percentage of children with primary school education, efficiency of water use, fertilizer and pesticide use, and providing access to markets. Two criteria that are pre-conditions for CmiA cotton are: no hazardous work or child labor should be used within the cotton production chain, and cotton should not be grown on land allocated to nature by national laws. The use of biotech seeds is banned in CmiA.

CmiA intends to enhance the competitiveness of African cotton by training farmers in optimal management practices at farmer field schools, organized by local cotton companies. Furthermore, local cotton companies provide micro-credits to finance inputs and, in return, farmers commit to sell their cotton to the supporting company.

Besides farmer training and cooperation with cotton companies, CmiA's second pillar is the "demand alliance" of textiles retailers and brands that buy and integrate CmiA cotton into their global supply chains and pay back a license fee to the Aid by Trade Foundation. CmiA intends to feed its cotton smoothly into the value-added chains of large trading companies with their global buying markets, thousands of suppliers and new fashion trends. The targeted demand segment is price-conscious consumers interested in promoting African development through sustainable practices. This is a significant difference with Fairtrade and organic cotton, which are certification schemes designed to access niche high-end markets.

The CmiA project was initiated in 2005 as a public-private partnership by the Aid by Trade Foundation. The project is supported by a broad alliance of partners, coordinated by a project advisory board. The CmiA strategic alliance includes partners in industry, the public sector, the research community, and non-governmental organizations that contribute to the initiative both with their financial support and through general and technical consulting: 1888 Mills Inc.,

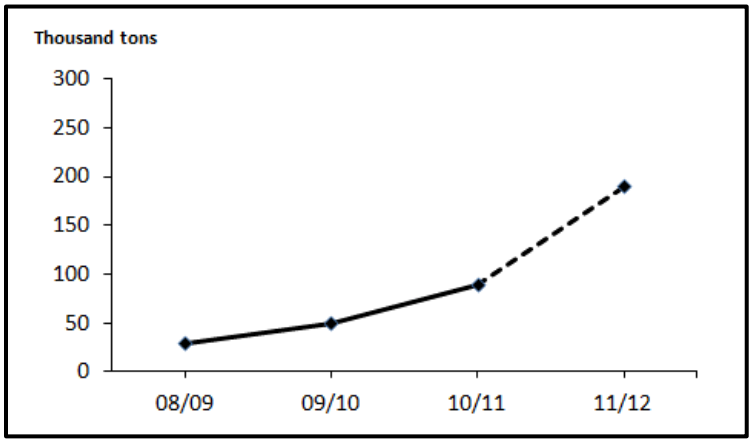
[11] "Sustainability" in the CmiA project stands for harmony between the economic, social and environmental components of cotton production.

Accenture, Avery Dennison Information and Brand Management Division, Bill & Melinda Gates Foundation, the German Ministry for Economic Cooperation and Development (BMZ), the German Investment and Development Company (DEG), the German Famine Relief Organization Deutsche Welthungerhilfe, Faso Coton, the German Organization for Technical Cooperation (GIZ), McCann Erickson, the Nature and Biodiversity Conservation Union (NABU), the North Rhine-Westphalian Foundation for the Environment and Development, the Otto Group, the REWE Group, Tchibo GmbH, Tom Tailor AG, Alterra-Universität Wageningen, Somdiaa, and the World Wildlife Fund (WWF).

Figure 5. CmiA Label

Currently the initiative works with 20 retailers and brands such as Puma, Otto Group, C&A, s.Oliver, Rewe, and Metro Group. Most of CmiA's partners are headquartered in Germany, which can easily be explained by the fact that AbTF and CmiA have German roots and still a German identity. Nevertheless, the initiative also focuses on international markets, especially North America and the United Kingdom. Besides donor support, CmiA is also financed through membership fees. Only recently CmiA started promoting a fixed-volume-commitment procedure for procuring cotton among retailers and manufacturers, to assure demand for CmiA cotton and to keep unit costs down.[12]

Figure 6. CmiA Production (lint)



CmiA grew from around 140,000 farmers producing 29,000 tons of cotton lint in 2008/09 to about half a million farmers producing a projected 190,000 tons of cotton in 2011/12. Despite its fast growth, CmiA cotton production still accounts for less than 1% of world cotton production. Zambia, Benin, and Burkina Faso participate in the project since 2008/09, Malawi and Ivory Coast since 2009/10, and Mozambique was integrated into the CmiA program in 2010/11. Eight

[12] During the most recent spike in cotton prices in 2010/11, retailers such as PUMA or Tchibo were canceling CmiA orders or not placing any new orders (Engel 2012). Cancelations also occurred for cotton produced under the other three initiatives, as well as in the conventional market.

cotton companies are currently partners of CmiA. The Aid by Trade Foundation is also working with cotton spinning plants in Ethiopia, Egypt, and South Africa, as well as on the island of Mauritius. For the year 2010, about 10 million licensed pieces of garment of CmiA quality were marketed by over 20 retail companies in Europe and North America. Retailers mark those garments whose purchase supports the Cotton made in Africa initiative with a woven label and a large paper tag.

The inclusion of additional cotton smallholders and cotton companies was accompanied by extended CmiA / Compaci[13] support to training and access to finance to farmers via partnering cotton companies. Between the beginning of 2009 and the beginning of 2012, about 250,000 cotton farmers were trained in basic agricultural technologies, another 250,000 in IPM, GAP, conservation farming or harvesting technologies, and 200,000 in the proper use and storage of pesticides (Kaut 2012).

Besides the above cited difference between CmiA, and FT and organic cotton regarding the targeted demand segment, the other major difference relies on the verification methods: while FT and organic cotton are certified, CmiA does not rely on a certification but on a verification system drafted at Wageningen University in the Netherlands and further developed by the consulting firm PriceWaterhouseCoopers, and each step of the supply chain (methods of cultivation, transport, ginning, and storage of raw cotton) is verified independently.

The first third party verifications started in February 2009 and focused on 7 ginnery operations in Benin, Burkina Faso and Ivory Coast. The third party verifications in Malawi and Zambia for 5 ginneries followed during the ginning season in August/September 2009.

The first field verifications of CmiA (by Ecocert and AfriCert) took place in December 2009 in Burkina Faso, Benin and the Ivory Coast. No significant findings were recorded during field visits, nor was there any systematic non-compliance with CmiA exclusion criteria. The second round of field verifications started in March 2010 in Zambia and Malawi. In total, 171,433 farmers were verified, organized in 5 management units, planting 198,210 hectares with an average yield of 781 kilograms of seedcotton per hectare. The third round of the bi-annual CmiA third party verification by the verification companies EcoCert and AfriCert took place from November 2011 to January 2012 in West Africa and from February 2012 to April 2012 in Southern Africa. All CmiA entities (cotton companies, ginneries and contracted smallholder cotton farmers) passed the verification and updated their management plans. These plans are the main tool for continuous improvements along the CmiA sustainability criteria (Kaut 2012).

In 2011, the yearly CmiA/Compaci stakeholder workshop focused on updating CmiA's verification matrix and the introduction of a new standard (Kaut 2012). The updated CmiA's verification matrix provides stricter criteria for pesticides and water use, and measures the success of farmer training. The latter might constitutes a useful tool for cotton companies to monitor the impact of their training measures in the field.[14]

The new standard introduced by CmiA/Compaci, called the Smallholder Cotton Standard (SCS), is based on the CmiA verification criteria and governance, but biotech cotton is not banned (i.e., it is biotech-neutral). The new SCS is not yet available online.

A Memorandum of Understanding was signed between the AbTF[15] and the Better Cotton Initiative (BCI) on the way to a full partnership agreement between CmiA and the BCI. The main

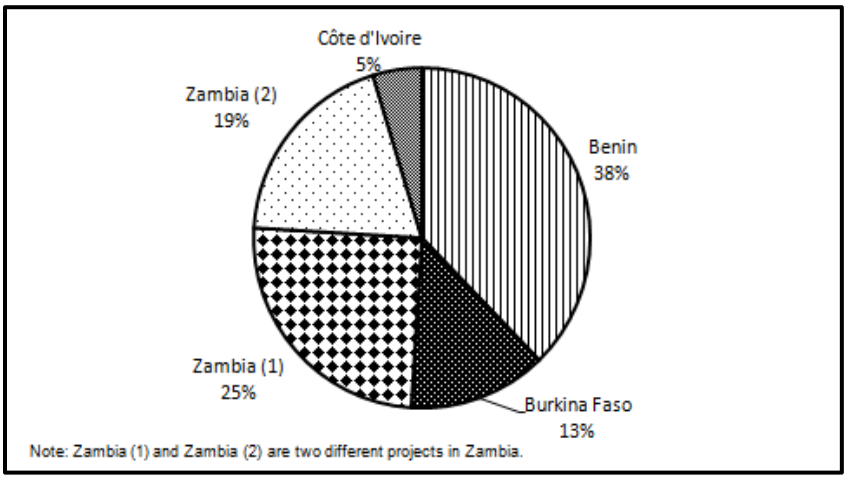
[13] Compaci (Competitive African Cotton Initiative) provides financial and technical support to cotton smallholders through cotton companies partnering with AbTF/CmiA. Compaci is managed by DEG GIZ and AbTF and financed by the German Ministry for Economic Development and Cooperation (BMZ) and the Bill & Melinda Gates Foundation.
[14] The new criteria vol. 2 and the verification governance are available at www.cottonmadeinafrica.org
[15] AbTF/ATAKORA GmbH, which is the commercial arm of the AbTF, actually signed the agreement with the BCI.

aim is to harmonize systems and procedures and make CmiA cotton available to BCI manufacturers and retailers, such as IKEA, H&M, Levi's and adidas (mainly outside Germany). Since July 1, 2012, BCI partners have been able to purchase CmiA cotton through the BCI. The BCI has taken a neutral position on the use of biotech seeds, but CmiA will continue to ban biotech seeds.[16]

CmiA is considered complementary to organic and FT cotton, since they target different market segments, and the CmiA project cooperates regularly with organizations like the Textile Exchange.

Besides supporting smallholder training, AbTF is increasingly mobilizing its own funds and funds from retailers and development organizations to supplement investments of cotton companies into projects for the farming community. Projects include health, education and women empowerment. Since 2009, AbTF has mobilized over euro 2.1 million and is actively supporting five community projects in four CmiA countries (Kaut 2012).

Figure 7. Expenditures in AbTF community projects by country and project in % of total



The Better Cotton Initiative

The goal of the Better Cotton Initiative (BCI) is to make global cotton production better for the people who produce it, better for the environment it grows in and better for the sector's future. The long-term objectives of BCI are to demonstrate the inherent benefits of Better Cotton (BC) production, particularly the financial profitability for farmers; to reduce the impact of water and pesticide use on human and environmental health; to improve soil health and biodiversity; to promote Decent Work for farming communities and cotton farm workers; to facilitate global knowledge exchange on more sustainable cotton production; and to increase the traceability along the cotton supply chain.

The BCI was launched in 2005, as a result of a global multi-stakeholder consultative process. The BCI operates as a not-for-profit membership association and is open to any organization involved in, or with an interest in, the cotton supply chain, and that supports the BCI's mission.

[16] See http://www.cotton-made-in-africa.com/en/cmia-news/news/detail/article/cotton-made-in-africa-to-stay-entirely-free-of-genetically-modified-cotton.html

Current BCI members amount to over 185, including associations of cotton producers (ABRAPA from Brazil, AProCA from Africa, Farmers Associates of Pakistan, and the International Federation of Agricultural Producers), retailers and brands (Adidas, Asda, Hemtex, H&M, IKEA, KappAhl, Levi Strauss & Co., Lindex, Marks & Spencer, Migros, Nike, and Sainsbury's Supermarkets Ltd.), suppliers and manufacturers (Olam, Chenab Ltd., Ecom Agroindustrial Corp, Ltd., and Sadaqat Ltd.), associate members (APTMA from Pakistan, and CottonConnect), and members from the civil society (Cotton Incorporated, Pesticide Action Network UK, Responsible Sourcing Network, Solidaridad, and the World Wildlife Fund). BCI's head office is in Geneva, Switzerland, with regional offices in Brazil, China, India, Mali and Pakistan.

The BCI is not about creating a premium product to attract a higher market price. Rather, the focus is on reducing costs at farm level (and therefore increasing farmers' profits) through better management practices and reduced input use. Participating farmers must meet the Minimum Production Criteria, based on pesticide use, health and safety, water use, fiber quality, habitat protection, freedom of association, child labor, forced labor, and non-discrimination. Furthermore, farmers need to set up a yearly plan to improve their practices to meet all of the Production Principles. BC is not labeled, but it does involve some third party monitoring and verification. Furthermore, BCI is financed through membership fees and farmer support contributions, which vary across the membership categories. One major difference between BC and the other three initiatives described in this article is that while biotech seeds are banned from the latter, BC is biotech-neutral.

The supply chain for BC segregates BC from other cotton up to the gin level. Once a bale of BC is formed, it is given a unique identification that can then be used to track that cotton through the remainder of the supply chain using third-party track-and-trace systems. In 2010/11, BCI launched an online system (the BTS) which allows members to identify BC bales and verify the authenticity of bought bales. Responsibility for tracking the bale of BC from the gin to the end consumer product is the responsibility of the organization interested in sourcing BC. Thus, the supply chain for BC enables end buyers to substantiate claims regarding their use of BC. BCI is not developing a labeling system whereby products containing BC can be labeled as such. BCI works to promote purchase of BC directly by ginners. In Mali, almost 80% of BC seedcotton was purchased by ginners in 2011/12, while that percentage was 58% in India and 25% in Pakistan (Melvin 2012).

Despite being a non-labeled product, some traders indicate that BC is traded at a premium over conventional cotton. That premium is market driven and not regulated by BCI.

Figure 8. BCI Logo

During the start-up implementation phase, the BCI has focused on Brazil, India, Pakistan and Mali. In 2010/11, 29,049 farmers participated in BCI and harvested 77,000 tons of cotton. Preliminary results from 2011/12 indicate that the number of BC producers in India, Mali and Pakistan increased to 92,000 and they harvested 182,000 tons of cotton[17]. A major occurrence in 2012 was the incorporation of 10,000 Chinese producers to the BCI, planting 16,000 hectares of cotton. The entire Better Cotton System will be externally reviewed at the end of 2012 to evaluate whether it has delivered the desired results and impacts.

[17] Only 49 Brazilian producers participated in BCI in 2010/11, but they produced 42,000 tons.

During the course of 2009, a group of private and public players developed a program to speed up the implementation of the BCI strategy: the Better Cotton Fast Track Program (BCFTP). The objectives of the BCFTP are: to create demand for BC through brand and retailer involvement; to create supply of BC through producer support programs and enabling access to finance for BC producers; to connect supply and demand through transparent supply chains; to support and strengthen the BCI; and to facilitate collaborative learning and reflection on the effectiveness of BCI implementation in coordination with the BCI. The BCFTP Fund was established to facilitate initiatives of retailers, brands, traders and other actors in the cotton supply chain to support BC production. The Fund, founded by BCI, Ecom, ICCO, IDH, IKEA, H&M, Levi Strauss & Co., M&S, Rabobank, Solidaridad, and the WWF, matches up to 1:1 the monetary and in-kind contribution of the private sector to the project(s). After staring projects in Pakistan, India, Mali, Mozambique and Brazil, the BCFTP has expanded into China in 2012. BCFTP has established the goal of working with a million farmers to produce a million tons of BC lint by 2015, of which the participants aspire to buy half.

BCI will likely start promoting a fixed-volume-commitment procedure for procuring cotton among retailers and manufacturers, similar to that implemented by CmiA, to assure demand for BC and to keep unit costs down.

Comparison of the Identity Cottons

Table 3 summarizes the main characteristics for each identity cotton. While organic cotton focuses mainly on the farming system and environmental sustainability, FT, CmiA and BCI are more focused on tackling rural poverty.

All initiatives support participating farmers through training and economic incentives (higher prices, premiums, dividends, and/or cost savings). All initiatives are partially funded through fees: license fees in FT, CmiA, and organic production; and membership fees in BCI.

Organic cotton is regulated by national standards and rules vary depending on where the final cotton products will be sold. The other three initiatives are regulated by single organizations (FLO, AbTF, and BCI) and therefore have uniform principles worldwide. End products made of organic cotton and/or FT cotton or CmiA are usually labeled as such, whereas end products made of BC are not labeled. Among the labeled products, only organic and FT cotton apply strict content rules. Many retailers mark those garments whose purchase supports CmiA with a woven label and a large paper tag.

Organic cotton production started in the early 1990s while the three other initiatives are much more recent, dating from the mid-2000s. Total cotton production across the four alternative initiatives amounted to about 2% of world cotton production in 2011/12.

Organic cotton is also the initiative with the largest geographical coverage: 20 countries (2010/11), compared to 9 growing FT cotton (2011/12), 7 participating in CmiA (2011/12), and 6 countries currently participating in BCI (2012/13). Organic and BCI cotton can be cultivated in any producing country, while FT cotton production is localized in developing countries and CmiA focuses on African countries.

Some of the initiatives may overlap: some FT cotton is also certified organic, while cotton produced through CmiA can be procured through BCI. However, only BCI allows for biotech seeds.

Table 3: Summary Table of the Major Identity Cottons

Characteristic		Organic Cotton	Fairtrade cotton	Cotton made in Africa	The Better Cotton Initiative
Start Year		Early 1990s	2004	2005	2005
Program specific to cotton		No	No	Yes	Yes
Regulating organization of cotton production standards		Coexistence of standards issued by governments and private companies	Fair Trade Labeling Organization (FLO)	Aid by Trade Foundation	Better Cotton Initiative (BCI)
Headquarters		USA	Germany	Germany	Switzerland
Major consuming countries/regions		North America, Europe and Japan	UK, France, Germany, Switzerland, the Netherlands, and Finland	Germany	Not available
Geographical production focus		Global	Developing countries	Africa	Global
Cotton area	**2010/11**	324,577 ha	n/a	312,159 ha	93,000 ha
	2011/12 p	lower	n/a	645,141 ha	230,000 ha
Cotton production	**2010/11**	151,079 tons	20,000 tons	89,266 tons	77,000 tons
	2011/12 p	143,600 tons	24,500 tons	190,307 tons	182,000 tons until December 2011
Number of farmers	**2010/11**	219,000	58,500	233,000	29,049
	2011/12 p	n/a	n/a	471,222	92,000
Top producing countries		India (68%) and Syria (11%)	India, Cameroon and Burkina Faso (jointly 97%)	Zambia (47%) and Ivory Coast (41%)	Brazil (55%) and Pakistan (27%)
Producing Countries (season)		20 (2010/11)	9 (2011/12)	7 (2011/12)	6 (2012/13)
Biotech seeds		Not allowed	Not allowed	Not allowed	Allowed
Lint identity preservation		Yes	Yes	Yes	Yes
Certification/verification of lint identity		Third-party certification	FLO-Cert (third party certification body owned by FLO)	Third-party verifiers	Third-party verifiers
Textile product labeled		Optional (GOTS, OE100, Blended). Strict content rules apply.	Yes. Strict content rules apply.	Members can use CMIA label at retail. No clear content rule applies.	No
Price paid to cotton producers		No minimum price	Minimum price + premium	No minimum price	No minimum price
Guaranteed sale for participating farmers		No	No	No	No

n/a: not available
p: projected

A FT minimum price and an additional premium are paid to FT cotton producers; the premium is invested in social or economic development projects. However, the FT minimum price and premium are guaranteed only if the cotton is sold under FT terms and not outside FT terms (non-FT cotton). Organic cotton usually receives a premium over the conventional price, but this premium is the result of negotiations between producers and merchants and varies depending on supply and use. CmiA does not guarantee a higher price paid to producers, but collects a small licensing fee from retailers that is used to finance small-holder training programs to increase yields, pay direct dividends to farmers, and support social projects in farming communities. BCI does not guarantee a higher cotton price paid to producers, but aims to

improve farm management practices and increase productivity. However, some traders report that in practice BCI cotton is traded at a (market-driven) premium over conventional cotton.

Challenges to Identity Cottons

The ICAC supports various alternative programs and has allocated significant amounts of time at meetings, space in publications and Secretariat research to topics associated with alternative cotton production in order to expand knowledge about these initiatives. Nevertheless, while the rates of growth from small beginnings for production of alternative cottons have been impressive in recent years, there are inherent limits to large-scale participation in such programs (Townsend 2009).

A major drawback of these four initiatives is that while farmers are required to learn new crop management techniques and, in most cases, to face additional costs, demand for their cotton is not guaranteed. In addition, no premium or minimum price is guaranteed to farmers (except if they produce FT cotton). Alternative cottons, as conventional cotton, are vulnerable to supply and demand fluctuations, and this is not fully clear to the general public.

Information on prices of organic cotton, CmiA and BC is not publicly available. This makes it difficult for incumbent farmers to plan ahead, and for other farmers to decide whether to participate in these initiatives.

FT, organic cotton, and CmiA face two extra challenges, both adding to the difficulties of segregation within the farm-to-apparel pipeline: the lack of an invariant marker for the cotton fiber to use in traceability systems, and the need of the textile industry to blend fibers to achieve uniformity in yarn and fabric production. Furthermore, for organic and FT cotton, certification itself entails expenses that might be prohibitive.

Other challenges to large scale adoption of organic cotton is that many regions do not produce sufficient biomass to use as green manure because cotton is often grown in water-scarce regions. Organic production systems require more labor than conventional systems because of the need to collect and compost fertilizers. (While conditions vary significantly with soil types and rainfall, a rough approximation is that 15 tons of green material must be gathered an composted to produce 3 tons of organic fertilizer to provide the nutritional needs of one hectare of cotton.) Protecting cotton from insects and maintaining soil fertility in an organic production system is more technically complex than in non-organic cotton production, meaning that the research and extension systems necessary to support organic cotton production must be at least as well developed as for non-organic cotton. Finally, a concern from the ICAC Technical Information Section presented to the 1993 International Conference on Organic Cotton still remains valid: commercially available cotton seed varieties have been developed for conventional production practices including the use of commercial fertilizers and stringent plant protection measures. New varieties need to be developed for organic cotton production with the breeding objective of improving plant tolerance to insect pests and diseases and maintaining a high yield level without synthetic fertilizers (Chaudhry 1993).In addition, the ICAC Secretariat believes that the underlying premise for organic cotton is that conventional production systems are damaging to workers or the environment is less valid than in the past because of ongoing improvements in cotton technology and increased understanding of the dangers of misuse of agrochemicals.[18] Based on surveys of production practices, the Secretariat believes that the

[18] In the 1990s, the use of crop protection chemicals on cotton peaked, accounting for some 20% of all global insecticides applied annually for agricultural purposes. However, according to Cropnosis, a private company in the UK, cotton's share by value of global pesticide consumption declined from 11% in 1988 to 6.8% in 2008. Similarly, the share of insecticide use declined from 19% in 2000 to 15.7% in 2008 (SEEP 2010).

majority of all cotton production each season is produced safely and in ways that are socially and environmentally benign.

Concluding remarks

The four identity cottons reviewed in this article have all gained in importance over the last few years, as consumers' sensitivity to the origin and manufacturing process of textile products has increased. While organic focuses mainly on the farming system and environmental sustainability, FT, BCI and CmiA also focus on tackling rural poverty. However, none of these alternatives targets income volatility for cotton producers, nor the risks associated with cotton price volatility, except for FT that determines a minimum price for FT cotton (although FT cotton producers are not guaranteed to sell their cotton at FT minimum prices). Identity cottons, as with conventional cotton, are vulnerable to supply and demand fluctuations.

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