We would like to thank the organic cotton farmers from around the world for inviting us into their world; generously sharing information with us and helping us better understand their challenges and opportunities. We would also like to thank everyone else in the organic cotton value chain who have generously shared information and insight with us. Their insight has been invaluable in shaping this report.

We would like to express our gratitude to the organizations working alongside Textile Exchange for their great contributions to our report. Together, we can help make cotton a more sustainable material; one that offers a more rewarding livelihood opportunity for the world’s cotton farmers.

Once again, this year’s Farm & Fiber Report would not have been possible without the generous contribution and support of our partner and funder ICCO (the Dutch interchurch organization for development cooperation).

We would also like to personally thank the following Textile Exchange members and friends:

**leadership**
- Elayne Masterson, Esquel, USA
- Peter Melchett, Soil Association, UK
- LaRhea Pepper, Textile Exchange, USA

**primary partner**
- Willemijn Lammers and Marian van Weert, ICCO, The Netherlands

**sustainability initiatives**
- Bastien Bandi, BCI, Switzerland
- Brent Crossland, Bayer e³TM, USA
- Christoph Kaut, and Tina Stridde, ABT Foundation, Cotton Made in Africa, Germany
- Damien Sanfilippo, Fairtrade International, Germany
- Marcia Gibbs and Lynda Grose, Cleaner Cotton™, USA

**advancing sustainability**
- Edith Lammerts van Bueren and Bo van Elzakker, Louis Volk Institute, The Netherlands
- Frank Eyhorn, HELVETAS Swiss Intercooperation, Switzerland
- Heinrich Schultz, OrganiMark, South Africa
- Monika Messmer, FiBL, Switzerland
- Rosanne Grey, CottonConnect
- Therese Albers, Solidaridad, The Netherlands

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- You Le, Ecocert, China

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- Davo Simplice Voduouhe, OBEPAB, Benin
- Gian Nicolay, FiBL, Switzerland
- Laurent Glin, FiBL, Benin
- Lazare Yombi, HELVETAS Swiss Intercooperation, Benin
- Leonard Mmaa, Tancert, Tanzania
- Mahamady Sawadogo, UNPCB, Burkina Faso
- Niranjan Pattni, bioRe Meatu, Tanzania
- Riyaz Haider, BioSustain, Tanzania
- Sidi Moctar Nguiro, MOBIOM, Mali

**(Latin America)**
- Javier Otaya, New Expo, Peru
- Olga Segovia, Aratex, Paraguay
- Orlando Rivera, Bergman Rivera, Peru
- Oscar Mallqui, Oro Blanco, Peru
- Pedro Jorge Bezerra Ferreira Lima, ESPLAR
- Rede do Algodão Agroecológico do Nordeste, Brazil

**(India)**
- Agricultural Products Export Development Authority (APEDA), India
- Arun Ambatipudi, Chetna Organic
- Mahesh R., Arvind Mills
- Rohit Doshi, Mahima
- Shreyaskar Chaudhary, Pratibha Syntex
- The National Commission for Organic Farming (NCOF) India
- Vivek R., BioRe India

**(China)**
- Tong Young, Mecilia, China
- Yan Jia and You Le, Ecocert China
- YC Man, Esquel, China

**(EMENA & CA)**
- Atila Ertem, OTS, Turkey
- Aydin Unsal, Egedeniz, Turkey
- Heba Askar, Business Development Specialist, SEKEM, Egypt
- Kees Maris, Mavideniz, Turkey
- Mali Shenitzer, Israeli Cotton Board, Israel

**(USA)**
- Angela Jagiello, OTA, USA
- Kelly Pepper, TOCMC, USA

**acknowledgements**
foreword

tradition, innovation and science . . . .
leading to resilience

While we are the ones researching, vetting and producing the reports here at Textile Exchange, we also remain students of the world. We’re just as anxious for the results as each and every person who downloads the reports from our website. There are always some surprises, some good news and some indicators that our work is far from done. This is never more true than with the 2011-12 Farm & Fiber Report.

Despite a list of significant challenges currently facing the organic cotton community, our Farm & Fiber Report this year shows resilience beyond our expectations. Organic cotton production levels have remained stable overall. Some countries, such as Tanzania and Nicaragua, have expanded significantly. Unfortunately, Syria, the second largest producer for the past two years, is facing tumultuous times. Our thoughts and hearts go out to the Aleppo farmers in Northwest Syria.

When we talk about organic cotton-growing countries and regions, it’s important to remember that organic farming is particularly complimentary to small-scale farmers. The men and women who spend their lives growing this cotton are contributing so much to our world. Organically grown products, be they food or textiles, come to the market with an ecological and social “value addition.” This means that organic can act as a beacon for the agricultural sector, allowing us to follow that beacon toward a healthier ecosystem.

Based on the numbers we’ve calculated, it is a relief to see the global production of organic cotton starting to stabilize. From 2006 to 2010, we saw four years of rapid growth in organic. After last year’s significant drop of 37 percent, this year’s relative parity is not as daunting.
what accounts for this move toward stabilization?

We have seen some progress made in terms of seed security for farmers and clearer market signals as well as commitments from brands and retailers. Some regions are forecasting growth or even developing new projects. That progress must continue and even strengthen if we are going to see the organic cotton yields really flourish as we all want them to.

This year, we’re finding some significant changes and progress in various regions, which is highlighted in detail in this report.

There is a need for a steady supply of quality non-GMO seed. This is true for all farmers, including Fairtrade certified farmers, Cotton made in Africa and others. Together with farmers and colleagues at CottonConnect, FiBL, Louis Bolk Institute, AgriLife Texas and Helvetas, Textile Exchange is developing a plan to make this happen. We’re working toward a shared platform to improve access to knowledge and hopefully stimulate investment in seed suitable for organic and other alternatives to GMO. At this point, we are seeking funders who can help us invest in this crucial step for the future of organic cotton. Investment in cotton seed is critical.

In terms of data, we know more than we ever have. We’re now able to present some clear trends, success stories and problematic issues with the information we do have, but we always need more. At Textile Exchange, we are focusing on more benchmarking, studies and quantitative data, particularly data directly from the farms growing cotton in their organic production systems. As they say, knowledge is power. And every time we use our resources to learn not only what is happening with organic cotton but also why, we can use those learnings to initiate global programs and solutions.

Last year, Textile Exchange surveyed 30 organic cotton producer groups, representing 132,000 farmers spanning 16 countries to learn more about their practices and impacts. Soon we will be publishing the results of this comprehensive study. Alongside this in-depth farm survey we are collaborating with others to undertake an independent Lifecycle Analysis of organic cotton cultivation. We’re keeping up with this never-ending process.

The partners listed earlier, as well as many others, are really coming together. Personally, it’s exciting to witness the awareness and the commitment of brands, retailers, manufactures and all members throughout the supply chain. They are taking seed issues seriously – not just talking about it, but taking action. We’re seeing more and more companies implement best practices in the business model and find new ways to work together. They’re work is helping to stabilize the organic cotton industry because these partners believe in the long-term proven benefits of organic cotton.

So let’s take the next steps. Not the baby steps, the giant steps. Let’s keep building the Organic Cotton Roundtable – a conglomerate that has already demonstrated commitment and dedication to the entire supply chain. This includes a focus on integrity. We can’t allow any more tragedies as we’ve seen in Bangladesh, because no matter what happens with our textiles, it comes down to human lives. This Farm & Fiber Report shows us where we stand today and identified key issues for tomorrow. We know you’re serious about making a difference. Please take those giant steps with us and together, we can secure the future of organic cotton.

LaRhea Pepper
Managing Director of Textile Exchange and organic farmer
At Textile Exchange - “We envision a global textile industry that protects and restores the environment and enhances lives” - we are pleased to bring you the Farm & Fiber Report for 2012.

We are dedicated to researching, reporting and promoting sustainable cotton and practices, with organic as the beacon of sustainable fibers.

Included in the report you will find production volume and commodity prices, as well as an exploration of the many sustainable alternatives across the value chains.

The organic market has stabilized after years of rapid growth, in fact, 2012 brought an 8 percent decline in growth from 2011. This decline is representative of Syria not being included in production figures due to civil unrest, as well as reduction in USA production caused by drought.

We highlight the need for good quality non-GMO seed and seek to build a platform to stimulate investment. As well, we embrace the collaboration demonstrated by the organizations advancing cotton sustainability.

While the next decade will bring powerful forces on the supply and demand side, the Farm & Fiber Report demonstrates strong resilience in the organic cotton community.

Finally and perhaps most significant: the market demand remains committed and strong.

At Textile Exchange we value greatly our growing collaborations with the marketplace, and we look forward to innovative solutions to serve the industry better.

Elayne Masterson
Board Chair of Textile Exchange
Director, Merchandising, Esquel Apparel
Organic farming was developed in the 1930s as an alternative to the new, rapidly developing, manufactured fertiliser dependent, systems which swept much of western farming in the post war years. The switch from using manufactured nitrogen in weapons of war to fertilize increasingly industrial cropping, was mirrored by the introduction of chemical pesticides that these supercharged crops required to protect them from pests and disease. Organic farming is solar powered, and aims to maintains the long-term health and resilience of soils. It depends on diverse systems of cropping and livestock, and on healthy and diverse populations of wildlife on farms, to combat disease and pests, without the use of external, non-renewable inputs.

Last year the Soil Association and GOTS launched our “Have you cottoned on yet” campaign, to communicate the unique benefits of organic to consumers and brands alike. We have had a wonderful response, from other NGOs, brands (big and small), and the public, who have signed up in their thousands, recognizing organic as the gold standard. And the market is looking positive, with Soil Association licensees’ sales up 10 percent last year. In this report, I am delighted to see news of a return to growth in organic cotton production in India, by far the largest producer of organic cotton.

It has been a tough slog over 80 years to develop today’s organic farming practices and the market for organic food and fiber, and there is still a long way to go. I think people increasingly recognise that environmental sustainability and social justice go together, and that we do need radical changes all the way from the farm through the whole of the supply chain to achieve products which the industry can be proud of, and which will help us leave a planet fit for our children and grandchildren.

Lord Peter Melchett
Policy Director at Soil Association UK and organic farmer
about Textile Exchange

mission
Textile Exchange inspires and equips people to accelerate sustainable practices in the textile value chain. We focus on minimizing the harmful impacts and maximizing the positive effects of the global textile industry.

vision
We envision a global textile industry that protects and restores the environment and enhances lives.

strategic goals
- Textile Exchange helps embed sustainability into evolving business and supply chain strategies.
- Textile Exchange makes it easier to adapt to changing opportunities and requirements in textile sustainability.
- Textile Exchange works to ensure that actions taken toward sustainability result in real and meaningful change.

our position on cotton
Our signature program continues to be in “fairly traded” organic cotton, from the farm through the entire supply chain.

Textile Exchange works with companies and organizations along the textile sustainability continuum. For cotton, this continuum begins with the entry-level initiatives designed to make mainstream production more sustainable right up to those engaged in environmental and socio-economic best practices.
farm engagement – what we do

The Farm Engagement team holds a remit dedicated to researching, reporting, and promoting organic cotton.

- Catalyze sustainable growth in more sustainable textile production and markets; promoting organic as the preferred cotton fiber. Sustainable growth means growth that is based on economic fairness, transparency, and ethical conduct, as well as growth that values and rewards protection of our ecosystem services (such as clean air, water and biodiversity).

- Help organic cotton producers build business capacity, gain access to sustainable textile and apparel markets, achieve visibility and linkage to Textile Exchange’s large network of brands, retailers and manufacturers seeking organic cotton.

- **BUILD VISIBILITY** for organic cotton practitioners by bringing a human face to the product, promoting leadership, and best practice.

- **RAISE AWARENESS** of the contribution organic agriculture makes to ecosystems and livelihoods.

- **SUPPORT INNOVATION** and farmer-friendly technology in an age of climate change and concern for energy-water-food security.

- **RESEARCH & REPORT** annually on organic cotton data and sustainability, fiber production and trends.

- **CREATE TIES** to tackle farm-level issues, find market-driven solutions, and to increase the reach and impact of our work.

---

the farm engagement team

<table>
<thead>
<tr>
<th>Region</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>Silvère Tovignan, Regional Director, Africa</td>
</tr>
<tr>
<td>India</td>
<td>Prabha Nagarajan, Regional Director, India</td>
</tr>
<tr>
<td>Latin America</td>
<td>Alfonso Lizarraga, Regional Director, Latin America</td>
</tr>
<tr>
<td></td>
<td>Alice dos Santos, Intern, Wageningen University</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Liesl Truscott, Farm Engagement Director</td>
</tr>
<tr>
<td></td>
<td>Hanna Denes, Programme Manager</td>
</tr>
</tbody>
</table>
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how to read this report

This year’s Farm & Fiber Report continues to bring you unique data, trends and analysis of organic cotton production. For the second year running we provide an annual snapshot of other key cotton sustainability initiatives, alongside organic. Complementing this overview of production, the report provides a shared platform for our like-minded friends and colleagues supporting organic cotton producers and other farmers on the ground working to improve the sustainability of cotton. We hope you enjoy this year’s report and we welcome your feedback!

part 1: the report summary
Our executive summary provides the essential “must read” material and gives you farm and fiber data at a glance. Global profile and production data, trends and analysis can be read here. If you have no time for more - just read this!

part 2: cotton – towards a greener landscape
Conventional cotton trends for 2011-12 have been presented here, alongside a discussion of sustainability “hot spots” for cotton agriculture and an examination of the emerging “greener” landscape.

part 3: organic cotton – regional insights
Data and trends for each organic cotton growing region can be found here. We have paid particular attention to Textile Exchange’s key regions: Africa, India, and Latin America. Our outlook for the future has been tailored to the specific needs of each of our regions.

part 4: a closer look at Fairtrade
Fairtrade International, among other fair trade organizations, works hard to address the inequalities of mainstream commodity trading, particularly for small-scale farmers living in poverty in developing countries. The Fairtrade program brings to the table something quite special with its focus on income security and whole-community development. There is much to learn from the fair trade agenda.

part 5: cotton sustainability Initiatives
Here we bring you farm and fiber data from a number of key cotton initiatives. Including the Better Cotton Initiative, and Cotton made in Africa. For the first time in our reporting, we introduce you to the Cleaner Cotton™ program and the new Bayer e3™ program, both operating in the USA.

part 6: organizations advancing cotton sustainability
Textile Exchange works alongside like-minded organizations. You can meet some of them here. We all work a little differently but share a common vision and ambition to make cotton agriculture more sustainable, and to improve livelihoods in the interest of a healthy environment and cotton farming communities worldwide.
part 1
the report summary
organic as the beacon

Introduction

Organic farming is particularly well suited to small-scale farming, and acts as a beacon of best practice for the agricultural sector generally. With the use of appropriate technologies and nature to help achieve production needs within a healthy ecosystem, organic agriculture strives for closed-loop systems of production. Organically grown products, be they food or textiles, come to the market with an ecological and social value addition.

Research continues to explore the potential organic agriculture holds in an age of climate change and the persistence of poverty, particularly in rural areas. Whenever we need to remind ourselves of the philosophy behind organic, the International Federation of Organic Agriculture Movements (IFOAM) definition provides that clarity of intent.

Organic agriculture is a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved.

But of course we need more than a definition to prove the worth of organic as the beacon of agricultural sustainability. We need more quantitative data particularly from the farms growing cotton in their organic farm mix. Last year, Textile Exchange surveyed 30 organic cotton producer groups, representing 132,000 farmers and spanning 16 countries to find out more about their practices and impacts. Soon we will be publishing the results of this comprehensive study. Alongside this in-depth farm survey we are in the early days of collecting Lifecycle Assessment (LCA) data. We hope to share the results of both these pieces of work later in the year.

Our work on re-visioning the businesses model for organic cotton is beginning to take shape. This year we launched our Collaborative Learning Series – a topic of six webinars led by topic experts – through collaborative learning we are building a better understanding of good business. We are also engaging 20 sustainability leaders, learning from their successes with organic, their challenges, and finally compiling their advice in an industry-led good business guide. We are ambitious that this approach will bring about a better understanding of good business models, and just as importantly, provide pragmatic support for the industry on ways to build more sustainable value chains.

The other big area of need for farmers, including Fairtrade certified farmers, Cotton made in Africa, and others, is access to good quality non-GMO seed. Together with farmers and colleagues at CottonConnect, FiBL, Louis Bolk Institute, AgriLife Texas, and HELVETAS Swiss Intercooperation, Textile Exchange is seeking funding to build a shared platform to improve access to knowledge and hopefully stimulate investment in seed suitable for organic and other alternatives to GMO. Investment in cotton seed is critical in India, China, Burkina Faso, and Brazil and pressure is mounting in other countries too such as Tanzania, Nicaragua, and Paraguay to introduce GMO.

Despite this list of significant challenges currently facing the organic cotton community, our Farm & Fiber report this year shows resilience beyond our expectations! Organic cotton production levels have remained stable overall. Some countries, such as Tanzania and Nicaragua, have expanded significantly. Others, such as Syria (our second biggest producer for the past two years), are facing tumultuous times. Our thoughts and hearts go out to the Aleppo farmers in Northwest Syria. We hope to welcome them back to the marketplace soon, and we hope the true spirit of organic agriculture, as captured by the IFOAM definition above, pulls the organic community together to benefit our shared environment and promote fair relationships and a good quality of life for all involved.
organic cotton - year in numbers 2011-12

138,813 mt of fiber produced

8 percent decline in production from last year

74 percent of world’s organic cotton produced in India

18 countries growing organic cotton

50 percent of countries increasing production from last year

190 percent production growth in Nicaragua

153 percent production growth in Tanzania

77 Tanzania’s percentage of Africa’s organic cotton

316,907 ha of land certified organic

214,905 number of certified organic cotton farmers

29 percent of African organic cotton farmers who are women

54 percent of Chinese organic cotton farmers who are women
**organic cotton - key findings**

### Global Production Stabilizing

From 2006 to 2010 there were four years of rapid growth in organic. After last year's significant drop, this year's relative parity brings some relief. While the challenges of the current business model and seed security for many farmers is far from resolved, progress is being made, e.g. some regions are forecasting growth or developing new projects. Furthermore, new value chain models and seed programs are starting to provide fresh solutions.

### Africa Achieves Record Growth

Biggest growth this year was from Africa (103 percent growth over last year), and most dramatically from Tanzania (153 percent). In part due to favorable rains, Tanzania's production leapt from 2,723 mt fiber to 6,891 mt on similar land area.

### India Remains Biggest Producer

India remains the biggest producer for five years running. Experiencing a one percent increase in production, and expanding from 102,452 mt last year to 103,004 mt fiber this year.

### Turkish Farmers Respond to Markets

Farmers in Turkey increased the area under organic cotton significantly this year in response to good market prices. Production grew by 64 percent from 9,613 mt fiber to 15,802 mt.

### Nicaragua Increases by 190 Percent

Nicaragua grows a relatively small amount of organic compared to other countries; however, that does not underplay the hard work of producer group, CAPROEXNIC, who grew 122 mt of organic fiber up from 42 mt the year before, 190 percent increase.

### USA Production Hurt by Record Drought

In the USA, Texas organic cotton farmers (among others) suffered severe drought. Despite an increase in planting by 36 percent the actual area harvested plunged -- with nearly two thirds of the planted crop abandoned to drought. As a result the USA saw a 45 percent reduction in the overall harvest (from 2,893 mt fiber to 1,580).

### Syria Civil Unrest a Barrier to Export

The second biggest producer of organic cotton, Syria, will not be included in this year's production figures. Syria grew 16,000 mt of organic fiber for the world last year. If production levels had remained the same this year the global total would have been in the region of 155,000 mt of fiber, representing a two percent growth on last year. However, due to civil unrest we have no clear understanding of production, except to say farmers are committed to their farms and certification has been frozen. We hope to welcome Syria back to the organic cotton market as soon as possible.

### Table 1: Top 10 Organic Cotton Producing Countries

<table>
<thead>
<tr>
<th></th>
<th>2007-08</th>
<th>2008-09</th>
<th>2009-10</th>
<th>2010-11</th>
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<td>Mali</td>
<td>Peru</td>
<td>Burkina Faso</td>
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</table>
the world’s organic fiber production

table 2

<table>
<thead>
<tr>
<th>country</th>
<th>fiber production (mt)</th>
<th>fiber production (% of total)</th>
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<tbody>
<tr>
<td>India</td>
<td>103,003.52</td>
<td>74.20%</td>
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<tr>
<td>Turkey</td>
<td>15,802.00</td>
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<td>China</td>
<td>8,105.53</td>
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<td>6,890.90</td>
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<td>Burkina Faso</td>
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<td>Benin</td>
<td>328.00</td>
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<td>Kyrgyzstan</td>
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<td>Tajikistan</td>
<td>16.00</td>
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</table>

**total** 138,813.30

footnote:
- No data from Syria (production continuing, but no export due to civil unrest)
- No data from Pakistan (presumed to have ceased production)
chart 1
breakdown of global organic cotton fiber production

chart 2
global organic cotton fiber production trend 2004-05 to 2011-12

chart 3
comparative analysis of cotton initiatives

---

Footnote:

1. Data rounded to the nearest whole number

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cotton initiatives - a snapshot of production

The chart below is intended to provide a simplified, side-by-side comparison of the similarities and differences of the various cotton sustainability initiatives and standards. It is not intended to be an in-depth comparison nor does it cover every standard or initiative in operation. Textile Exchange is currently revising the first version of our Cotton Sustainability Continuum (more about this on page 41). A more comprehensive introduction and the production figures of each initiative can be found in Part 4 and 5 of this report. For a deeper look at the requirements of the different initiatives, please visit their respective websites.

<table>
<thead>
<tr>
<th>Investment model</th>
<th>Verification/certification</th>
<th>Chain of custody system</th>
<th>Product label</th>
<th>GMO</th>
<th>Cotton initiatives – a snapshot of production</th>
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<tbody>
<tr>
<td>Contract growing</td>
<td>Self-evaluation and 3rd party audits</td>
<td>Field to product</td>
<td>Yes</td>
<td>Yes</td>
<td>Cleaner Cotton&lt;sup&gt;®&lt;/sup&gt;</td>
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<tr>
<td>Membership fee&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Partial 2nd and some 3rd party monitoring</td>
<td>Field to gin</td>
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<tr>
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<td>Volume based license fee</td>
<td>3rd party program verification</td>
<td>Field to gin&lt;sup&gt;1&lt;/sup&gt;</td>
<td>B2B and B2C</td>
<td>No</td>
<td>Fairtrade</td>
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<tr>
<td>Fixed minimum price and social premium</td>
<td>Certification by 3rd party</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>organic</td>
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<tr>
<td>Market premium to farmers&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Certification by 3rd party</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes&lt;sup&gt;4&lt;/sup&gt;</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of farmers</th>
<th>Area under production (ha)</th>
<th>Production cotton fiber (mt)</th>
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</thead>
<tbody>
<tr>
<td>15</td>
<td>24,000</td>
<td>435,000</td>
</tr>
<tr>
<td>27,143</td>
<td>90,000</td>
<td>455,000</td>
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<tr>
<td>400,000</td>
<td>564,000</td>
<td>214,105</td>
</tr>
</tbody>
</table>

**footnote:**
1. and farmer support contribution
2. some decoupling from market exists through individual contracts
3. chain of custody to product optional
4. transaction certificate
5. labelling possible – depends on retailer

- Data independently provided

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While the total number of Indian farmers fell by 8,700, Africa gained almost 7,000 new farmers. Please note it is not possible to report how many farmers moved away from organic cotton permanently, but from our understanding, organic farmers are known to vary their primary cash crop rotation depending upon the market. Strong market signals and favorable trade relations can almost certainly encourage them back to cotton. Globally, total land under organic cotton has remained fairly constant with only a 2.4 percent decrease on the year before. Fiber production dropped by 8 percent this year from 151,079 mt to 138,813 mt mostly due to the loss of Syrian organic. Syria has been among the top three global producers for four years contributing approximately 10 percent to the world’s organic cotton supply. This loss was one of the biggest influencers in 2011-12 but is expected to be only temporary. Unlike last year where we experienced a significant drop in fiber production from India, this year’s relative parity suggests a more stable production base generally.
Next year we are expecting organic cotton production to remain fairly constant, perhaps with a slight percentage decline. Much is dependent upon the weather conditions in the USA and Latin America (where droughts continue to impact production volumes) and the political situation in Syria. We believe fiber production volumes from India, Africa, China, and Turkey will remain the same or fall slightly, while the USA, Latin America, and Central Asia will improve moderately. This will probably result in a two-three percent global decline, and an approximate production volume of 136,000 mt of organic cotton fiber. If Syria returns to the market there will be a slightly more favorable picture.

**footnote:**
- The chart above is only intended to give a very early estimate of organic cotton production for 2012-13.
- China is expected to remain constant.
- EMENA & CA figure does not include an estimate for Syria.
organic cotton sector in brief

Highlights of Regional activities for 2011-12 are summarized here. For further insight and in-depth analysis of each Region, please see Part 3 of this Report.

Africa

- Six countries; Benin, Burkina Faso, Mali, Sénégal in West Africa, and Tanzania and Uganda in the East, produced Africa’s organic cotton.
- Africa grows mainly medium and short staple fiber, plus a small amount of long staple.
- As a continent, Africa experienced strong growth of 103 percent; expanding production from 4,400 mt fiber to 8,922 mt.
- All countries increased production, none more dramatically than Tanzania (153 percent) in part due to the favorable rains. At 6,891 mt (up from 2,723) Tanzania produced over three quarters of Africa’s organic cotton, and ranked as the fourth biggest producer worldwide, accounting for 5 percent of the world’s production.
- Strong growth, 47 percent and 43 percent, respectively was also reported from Burkina Faso and Benin. Both West African countries planted enthusiastically in response to the good market prices for cotton the year before.
- Only Burkina Faso has to date introduced GMO (Bt) cotton, although there is a concern about contamination amongst neighboring countries, particularly when gins are shared across borders. The pressure to introduce GMO cotton to other African countries, such as Tanzania and Uganda, is high.

China

- China grows medium and long fiber almost exclusively in the Xinjiang province. Xinjiang is China’s dedicated non-GMO zone.
- Approximately 60 percent of China’s organic cotton is grown in Hefeng, Xinjiang.
- The majority of the organic cotton farmers in China are well-organised, with strong certification systems.

- Organic fiber production took a 35 percent fall this year from 12,385 to 8,106 mt.
- There are a number of inter-related reasons for the decline in production ranging from a lack of investment in small-scale family farming, weak market demand and subsidized conventional production, as well as the challenge of accessing non-GMO cotton seeds.
EMENA & CA

- The HELVETAS Swiss Intercooperation initiated an organic cooperative in Kyrgyzstan that continues to flourish, producing 156 mt of fiber, a two percent growth on last year. Farmers in Kyrgyzstan invest in a diverse cropping system, with organic cotton among other organic food products for market.

- The more recently HELVETAS Swiss Intercooperation-initiated organic cooperative “Bio Kishovarz” in Tajikistan currently produces 16 mt of certified organic fiber and 220 mt in-conversion. For 2012-13, Bio Kishovarz is expecting 100 mt organic and a further 800 mt in-conversion. Tajikistan is capable of growing superb extra long fiber (up to 40mm) and with the right market support is set to explore this new business opportunity.

- There was a decline from 907 to 420 mt of organic Egyptian cotton this year. “Naturetex”, one of the SEKEM group of companies, remains the business partner of choice for the biodynamic/organic cotton farmers.

- Israel remains a small producer of organic, with four-five farmers producing approximately 70 mt of organic Extra Long Staple fiber on about 55 ha of land.

- We are not reporting on Syrian organic cotton this year (which in the past reached 20,000 mt of fiber). We remain hopeful Syria will once again be a significant sourcing country once peace returns.

- All cotton farmers in Turkey, including organic, planted with renewed vigor this year on the strength of the previous season market price. Higher acreage resulted in a sizable 64 percent increase which took Turkey from 9,613 mt last year to 15,802 mt and placed them second in the global production ranking. The Aegean region produces a high quality Izmir cotton with a long staple, while the South East Anatolian region grows a shorter fiber but greater quantities. SEA now accounts for 65-70 percent of Turkey’s organic cotton production.

Latin America

- Latin American organic cotton producer countries continue to find unfavorable weather and markets challenging.

- Peruvian organic cotton (which includes the extra long staple Pima) production dropped 23 percent this year. Likewise, Paraguay experienced a 33 percent fall.

- The organic Fairtrade farmer networks located in the semi-arid region of Brazil tragically suffered yet another drought affecting production severely and resulting in a 58 percent drop.

- The Nicaraguan producer group CAPROEXNIC expanded by an astounding 190 percent on its 42 mt of fiber from the year before, taking volumes up to 122 mt.

- Secondary cash export crops such as organic sesame helped boost farmers income in both Paraguay and Nicaragua.
Over 90 percent of the organic cotton production in the USA is located in Texas, and grown mostly on rainfed land. Texan farmers (among others in the Southwest) suffered severe drought in 2011.

Despite the drought and the fall in production (of 45 percent), the USA held its ranking position of fifth biggest organic cotton producer in the world, for the third year running.

For further insight and in-depth analysis of each Region please see the Part 3 of this Report.
Adam Smith’s “Invisible Hand” of the free market does not seem to be enough to orchestrate a stable world organic cotton production system. Weak market signals, time delays, inconsistent lead times and other market uncertainties of the textile industry means business from farm to final product requires more engagement in order to effectively smooth out issues between supply and demand. A sole focus on price is not the answer.

The importance of committed, long term engagement is what value chain analysis refers to as “Vertical Co-ordination” (Herr 2007) where the uncertainty about future revenue flows are minimized, especially for the most vulnerable participants in the chain. In the case of organic cotton agriculture, a willingness to acknowledge the efforts that go into ecologically sound production, grown with integrity, cannot be over emphasized. The farmer is without doubt the most economically disadvantaged and least powerful player in the value chain. While it may be difficult to enhance his or her position, creating a more enabling environment and working consciously to “share the value” is the responsibility of the more powerful players up the value chain. This is usually in everybody’s best future interest.

What is also needed are more innovative ways to both capture and communicate the ecosystem and social capital value of organic cotton. In recent times supply chain analysis has been valued for its contribution to understanding how rural poverty in developing countries can be minimized and how the rural poor can actively participate in supply chains. If this is not being delivered then there is a need to rethink and re-structure the chain with the participation of all stakeholders.

The ILO’s Value Chain Development Briefing 3 titled “Improving Working conditions through Value Chain Development” speaks about global competition and the pressures to produce more efficiently at lower costs.

The report says “Lead companies often give conflicting messages to suppliers. While demanding compliance of codes of conduct and better working conditions at the same time they often demand delivery at lower prices and in shorter lead time. And so the domino effect continues.”

Although the report focuses on working conditions, the extract above appears to be applicable to some of the issues confronting trade in raw material, including organic cotton, today.

In terms of re-engineering value chain operations the goal must be to achieve a more secure business for all, one that results in a better match between demand and supply and considers the wellbeing of the people behind the product. Many organic farmers are already working collaboratively in order to organize their production, certification, and logistics for market. The next step is to take this organized “package” complete with inbuilt social and ecosystem benefits and develop long term trade relations with manufacturing partners. One approach to best practice is for the end buyer (brand or retailer) to formalize partnerships with producer groups who feed into their supply chain.

The goal is to achieve a value chain based on more holistic considerations. A holistic value chain integrates all actors into a transparent sequence from farmer to retail customer, balancing supply and demand and sharing the profits fairly amongst all in proportion to their risk.

Part 3 of this Report provides a closer look at prices, trade, and markets for each Region.
The context in which cotton operates is constantly changing – world economic conditions shape demand, weather events affect supply, and political upheaval can even shut down production completely.

To get a more detailed perspective, Textile Exchange ran a focused live consultation exercise, asking textile industry leaders from all walks of life to present their three key trends for cotton. This exercise gave Textile Exchange hugely valuable insight – helping us build a clear scenario of future trends and sector priorities.

The trend most frequently identified by our expert panel can be summarized as an Increasing Call for Social and Environmental Accountability – including evaluation of natural capital, and even a “new capitalism” based on triple bottom line accounting. This would lead to greater supply chain integration and transparency, plus a recognition of “tier 4” (farm level) impacts and their connection to the rest of the textile supply chain.

In the light of future uncertainty (such as carbon and resource constraint) forecasting will need to evolve into “backcasting” (i.e. starting by defining a desirable future and then working backwards to identify policies and programs that will connect the future to the present). Innovation, our experts said, will prove less risky than clinging to “business as usual”. This increasing scrutiny on business is expected to result in more pressure on companies to change, with event triggers – such as the Bangladesh garment factory collapse – acting as a tipping point in public demands for action.

The second trend most frequently identified was the Growing Competition for Land Use (choice between food/ fiber/ fuel) and other natural resources. Included here are issues such as food security, water security, land grabs, and seed sovereignty. Ecosystem rights and biological diversity as well as political and ethical debate make this trend an enormously complex one.

However much we might support sustainability in cotton, broader forces might result in farmers moving to higher value food crops or even away from farming altogether. We need to reverse urban migration – back to valuing cotton farming and rewarding farmers for all the social and ecosystem contributions they make.

Another competitive trend identified was the Risk of Manufacturers/Retailers Moving Away from Cotton as a Textile of Choice, either based on inherent factors such as water use or on external “pull” factors like innovations in other fibers which might take over from cotton.

Another major trend was the growing conviction that Certification is not Enough – the need to provide millenial consumers with more information and getting away from tick-box certification to a deeper understanding of integrity and organic agriculture’s contributions to sustainability through its holistic approach.

Rather than cherry picking different impacts – “water”, “energy”, “waste” – a more holistic view will bring our understanding of our economy closer to that of natural systems, closed loop cycles and towards the notion of a circular closed loop economy which makes things that last, produces less waste, and promotes long-life, slower fashion with a connectedness to the environment from which it originated.
There are a growing number of indices and rating systems in development these days; creating a demand for sustainability data. Impact assessment and Lifecycle Inventory data are increasingly being used to drive the textile industry towards investing in more sustainable raw materials, more resource efficient and less hazardous processes, and pushing organizations and companies to better quantify performance improvement. Further, numbers play a key role in better understanding and finding solutions to hotspots and weak points, but they are only part of the picture. Of course numbers are only as good at the methodology and tools on which they are based. Once again, greater engagement, capacity building, investment and collaboration within the supply chain is called for, to achieve better performance and shared value.

To date the organic cotton community has perhaps relied too heavily on the “model” of organic, drawing on examples of best practice to justify higher claims to sustainability. At this point, more data is required in order to be able to substantiate and communicate the proven benefits of organic cotton farming and its contribution to alleviation of rural poverty and protection of ecosystem services.

It is time to present hard data on the things that many organic producers take for granted in their lives such as better intercropping, responsible water usage and water saving techniques, community supported agronomy, food self sufficiency and better nutrition, improved cooperation though working in groups, access to technical and agronomic support and work that is based on self-respect and respect by others in the community. The above are all part of the organic life enjoyed by many farmers, but there is little data available to convince others further up the supply chain of it worth and value.

See Part 2 of this report for a closer look at sustainability hotspots for cotton agriculture.
what the organic community must do

The consultation exercise (as discussed on the previous page) drew out the following recommendations for the sector:

accountability

Secure credible / third party research and data on the ecological, social and economic value of organic cotton – that feeds into industry tools – such as the Higg index, and Environmental Profit and Loss statements. There is a need to bridge gaps in the data and match data to holistic thinking by backcasting and other techniques.

holistic land use

Emphasise the business case for agro-ecology and diverse cropping systems, ones that perhaps produce protein as well as fiber... and facilitate innovative financial, business, and supply chain models that support robust and resilient rural communities.

beyond certification

Promoting and driving “high performance” organic production that goes beyond current certification to emphasise the widest possible contribution, addressing climate change as well as entrenched poverty by investing in building robust communities through capacity building and prioritizing:

- Income diversification
- Food security
- Reverse migration / reinvigorate local
- Farmer champions – village / community leadership

We at Textile Exchange know that these models of high performance exist – we know many of the operators very well now – and have seen what can be done. An even greater level of participation, knowledge exchange, and “feeling the soil in one’s hand” is what’s needed to help break down barriers to progress.

Finally the recommendation made by this expert panel is to Research, Educate and Communicate – to increase everyone’s understanding of fiber and food systems and eventually to de-commodify cotton by developing a closer connection to our clothes and the people behind the production.
In last year’s Farm & Fiber Report we shone the spotlight on the key challenges for the organic cotton sector and the strain felt most keenly by the farmers: access to good quality non-GMO seed, and a disconnected investment model. We asked TE members and friends to join us on a quest to address these challenges.

In Hong Kong over 90 people; representing farmers, manufacturers, brands, retailers, and support organisations attended the inaugural meeting of the Organic Cotton Round Table. This level of interest indicated to us that we are not alone in wanting to work collaboratively on solution-finding. Since Hong Kong, TE has advanced the remit of the Round Table by examining the investment model, engaging in lifecycle assessment, collaborating on non-GMO seed and developing a seed strategy.

We are engaging in a “discovery process” with support from an independent consultant, and the involvement of twenty companies globally. Participating companies are those that have successfully integrated organic cotton into their business model. Through this process we will discover what works, what doesn’t, where the weakest points and biggest challenges are, and most importantly how we can find workable solutions to improving the investment model. The process is intended to be industry-led.

In support of our work on business and investment models we are working with experts and stakeholders to develop a lifecycle assessment for organic cotton. We know many brands and retailers need data to back up their corporate business case for organic cotton, and support their own key performance indicators. Without sound and accurate data it is difficult to prove the social and environmental benefits of organic cotton.

Seed breeding and all that goes along with it is an area of specialist expertise, so we are collaborating with the experts on the ground, in the research centres, and private sector. Together we plan to create a platform for sharing knowledge, advice, and case studies of successful approaches to securing seed supply.

Our farm team is developing “seed strategies” for key regions affected by a scarcity of good quality, non-GMO seed. These strategies will feed into a global seed strategy and identify the work TE can do to support not only the organic cotton community, but all standards (Fairtrade, CmiA, Cleaner Cotton) with non-GMO criteria.

This is an exciting remit – and a big one! Success will not happen overnight, nor will it happen without support and collaboration. What we need from you:

**contribute** - Please contact us to discuss how you can get involved. We very much need your expertise and support. We would also be very grateful for any financial support you can offer. Our budgets are small and we can’t - nor do we want to - do this alone. For example USD 5,000 from 10 companies or organisations would be enough to enable us to carry out the lifecycle analysis. If we receive more, we can set up an investment fund to start building capacity on the ground towards seed breeding and seed banks, farmer knowledge exchange activities, and workshops.

**come to Istanbul in November** - for the second meeting of the Organic Cotton Round Table. More about the conference [here](#).

**tell us what you think** - any feedback or suggestions are most definitely welcome! Please contact liesl@textileexchange.org to discuss our future plans.
part 2
cotton - towards a greener landscape
cotton – towards a greener landscape

photos: (top) TOCMC, USA, (bottom-left) CoopNatural, Brazil; (bottom-right) Biosustain, Tanzania
These days, there are many approaches to cotton growing, and even within each approach there is variation in techniques and a range of methods from best practice to poor.

However, for the purposes of this report we talk about “conventional” cotton (including GMO cotton) as that which enters the commodity market with limited or unspecific identity.

In the overview below we take a look at production volumes and commodity prices. Later on we paint the landscape of cotton sustainability.

In the conventional cotton market, the 2011-12 season saw stock and production rise to record levels. The record prices of 2010-11, a consequence of the cotton shortage of 2009-10, encouraged farmers to continue to increase production. World cotton production reached 124.2 million bales (27.1 million mt); a 6.4 percent rise from the previous year. At the same time, due to the slowdown of global economic growth, cotton consumption declined by 10.7 percent and stocks rose by 30 percent (ending stocks of 2011-12 were estimated at 69.6 bales). Consequently, market prices declined to an average of 99.81 cents/lb. but stayed higher than the 60 cents/lb average of the past decade (USDA).

Genetically modified (GMO) cotton is now more widespread than ever, occupying 69 percent of the 35.52 million ha under cotton (ISAAA). Textile Exchange reported approximately 50 percent of GMO cotton penetration in 2010-11. Currently, China, India, USA and Pakistan are the countries planting the biggest amount of GMO cotton in terms of acreage. India is experiencing declining yield performance and continues to show the most polarized views as to the benefits of GMO in cotton, having rejected its introduction in food crops.
The figure above shows the percentage breakdown of cotton produced in the world in 2011-12. The figure below shows the trend in world production, consumption and prices for conventional cotton over the past six years (USDA). The data has been extracted from the Index of selected cotton price quotation offerings Table and the World cotton supply and use Table prepared by the USDA. A breakdown of major producer countries for 2011-12 can be found in Appendix A. For a deeper analysis, please refer to the World Cotton Outlook Report 2012.
Textile Exchange views sustainability as a journey not a destination. In this section we take a brief look at the hot spots for cotton agriculture, the expansion of sustainable agriculture, and the approaches offered by the various initiatives and movements currently working to improve the sustainability of cotton production.

**Water Use**

Water issues include scarcity of supply, diversion of water for irrigation, the potential negative consequences of salinization, and water resource depletion. Cotton thrives in a hot dry climate; however, water can boost yields if delivered at the right time in the right quantities. Water abstraction for irrigation and diversion from meeting other needs (including environmental “in-stream” needs) can create environmental stress, particularly in already water-stressed regions. The environmental impact of water use is considerably lower for rain-fed than for irrigated cotton, however the opportunities for yield gains by optimizing water applications are also consequently lower.

About 53 percent of the world’s cotton areas are assisted by full or supplementary irrigation (ITC). Note: Textile Exchange estimates that between 75-80 percent of organic area is rainfed.
agricultural use

Despite efforts to reduce agrichemical use in cotton, pesticides still pose a considerable threat to lives and ecosystems. Insecticides used in cotton account for 15.7 percent of the world’s insecticide use (ICAC) and include highly toxic active ingredients from the carbamate and organophosphate chemical classes (note the commonly used organochlorine endosulfan is now being phased out).

The use of pesticides poses health risks to workers; to organisms in the soil; to migratory species such as insects, birds, and mammals; and to downstream freshwater species. Research on the cause of fish deaths in the United States showed that pesticides, even used with the proper application, harm freshwater ecosystems (WWF).

Genetically modified cotton attempts to counter-act the need for so many pesticides. However, there is new evidence that a strain of cotton bollworm (the main pest target for Bt cotton) is developing resistance (Pest Management Science). Further, in the case of the GMO “Roundup Ready” cotton, bred to withstand Monsanto’s herbicide Roundup a glyphosate based herbicide, Roundup-resistant “superweeds” are reportedly a large and growing problem, resulting in increasing volumes of glyphosate and new herbicides added to the mix (Grist).

The latest concern to add to the list is the decline of the honey bee and the emergence of Colony Collapse Disorder. CCD is under close examination and it appears neonicotinoid insecticides (some used in cotton such as Imidacloprid) are amongst the prime suspects. One third of the food we eat depends on bees for pollination (PANNA).

According to Croplife International global pesticide sales have grown by over USD 10 million between 1999 and 2009.
According to the Inter-governmental Panel on Climate Change (IPCC), agriculture currently accounts for 10-12 percent of global greenhouse gas (GHG) emissions, and this figure is expected to rise further. GHGs attributed to agriculture by the IPCC include emissions from soils, the digestion process of ruminant animals, rice production, biomass burning and manure management. There are other “indirect” sources of GHG emissions such as those generated from land-use changes, use of fossil fuels for mechanization, transport and agro-chemical and fertilizer production. The most significant indirect emissions are changes in natural vegetation and traditional land use, including deforestation and soil degradation (FAOStat).

The GHG emissions calculated for conventional cotton is estimated at 4,017 kg CO₂ Eq. per ha of lint as maximum figure. GHG emissions from low input / organic production is approximately 150 kg CO₂ Eq. / ha (Soth, J. Organic cotton and climate change. Presentation to World Congress on Organic Cotton, Interlaken, Switzerland, 21-24 September 2009). Textile Exchange notes that carbon is a complex measurement and subject to many variables at the farm level.
land use and biodiversity

The conversion of complex forests and other ecosystems to cropland has implications for ecosystem biodiversity. Intensive land use based on the high use of inputs (agrichemicals), monoculture and irrigation also reduce biodiversity.

The landmark Environmental Profit & Loss accounting exercise carried out by PUMA in 2010 monetized the company’s impact on the environment, and revealed environmental costs at “Tier 4” (production of raw materials including leather, cotton and rubber) of their supply chain to be among the most significant. The diagram below shows that over half (57 percent) of all PUMA’s environmental impacts are associated with Tier 4 operations (PUMA Financial Report 2010, page 8). The conversion of land for agriculture for key raw materials such as leather, cotton and rubber is the third greatest impact at EUR 37 million.

However, land use cannot be considered in isolation to other sustainability impact areas. For example, “conventional” ways to reduce land use may require more energy, more nutrients, and more water per hectare (AiAB).

Eco-functional Intensification (EFI) - EFI is the efficient use of natural resources and processes, improved nutrient recycling techniques, and innovative agro-ecological methods for enhancing the diversity and the health of soils, crops and livestock. Such intensification builds on the knowledge of all stakeholders involved, and relies on powerful information and decision-making tools in combination with new research knowledge and tools in the biological and ecological sciences. Eco-functional intensification is characterized by cooperation and synergy between different components of agro-eco systems and food systems, with the aim of enhancing the productivity and stability of the agro-ecosystems, and the health of all components (for more information see TP Organics).
The figure above from FiBL research indicates the number of studies that show organic farming having a positive (green bar), negative (orange bar) or no effect (number in white circle) on biodiversity of various animal and plant groups in comparison to non-organic farm management. This is a summary of 95 scientific publications. Various farm practices and landscaping measures are implemented in organic farming that have a proven positive influence on biodiversity.

GMO and biodiversity - According to the Land Institute, genetic engineering has many and varied effects on biodiversity, but it’s likely the long-term result will be a decrease in genetic variability of crops and other species. When viewed as an extension of industrial agriculture, genetic engineering is likely to accelerate homogenization of the biosphere (The Land Institute). The lead organic organization, IFOAM, is opposed to genetic engineering in agriculture due to the “unprecedented danger” it represents for the entire biosphere and the particular economic and environmental risks it poses for organic producers. Others, such as the UK Soil Association, point to the economic effects of locking farmers into a system which requires them to buy new seed each year, rather than reuse their own stocks.

In cotton, organic, Fairtrade, and CmiA certification do not allow the use of GMOs. Others such as the Better Cotton Initiative are “GMO neutral”.
A systems perspective is essential to understanding sustainability. In agriculture, the system can be viewed at the individual farm level, at the local ecosystem level, and through communities affected by the farming system both locally and globally. An emphasis on the system allows a broader and more comprehensive view of the benefits and consequences of farming practices on both human communities and the environment. A systems approach gives us the tools to explore the interconnections between farming and other aspects of our environment. (Agricultural Sustainability Institute)

These days, there is more awareness of the impacts agriculture has on the world’s ecosystems and indeed culture, and consequently we are seeing increased interest and investment in more sustainable production and farming practices, supply chains, and consumption. Of course, there are varying views on what constitutes more sustainable, just as there are a range of approaches to getting there.

Techniques aimed at reducing the environmental impact of cotton growing, such as precision agriculture, conservation agriculture, low or no-till, are approaches now sitting alongside integrated pest management (IPM) in the toolkit for more sustainable agriculture. Transition to greener agriculture takes investment, education, and capacity building as well as access to the right tools and equipment. Our understanding of best practice and the models for getting there continue to evolve.

In considering socio-economic impacts, sustainability initiatives in agriculture pursue compliance with various international codes such as the International Labor Organization and Human Rights Conventions. Some initiatives and certification schemes go further by addressing trade inequalities, women’s empowerment, and focus on strengthening communities, rural regeneration and reversing urban migration.
IFOAM defines organic agriculture as a production system that sustains the health of soils, ecosystems and people. It relies on ecological processes, biodiversity and cycles adapted to local conditions, rather than the use of inputs with adverse effects. Organic agriculture combines tradition, innovation and science to benefit the shared environment and promote fair relationships and a good quality of life for all involved. (IFOAM)

The IFOAM principles of organic agriculture are based on the principles of health, ecology, fairness, and care. IFOAM has a social justice agenda and explicitly states that production methods which violate human rights cannot be certified as organic.

The important point is that the more holistic and integrated the approach to sustainability, the greater the overall impact will be. Simply cherry picking one or two themes such as “water” or “energy” will generally not be viable in the long run due to the interconnected nature of the ecosystem, as shown below.

![Holistic Model of Sustainability](source: Urs Niggli, FiBL)
New ways of accounting for natural and social capital can help articulate the business case for holistic thinking. The Economics of Ecosystems and Biodiversity (TEEB) for business, alongside Trucost, is busy advancing this agenda.

Natural capital is the stock of capital derived from natural resources such as biological diversity and ecosystems, in addition to geological resources such as fossil fuels and mineral deposits. It provides the ecosystem products and services that underpin our economy and provide inputs or indirect benefits to business. Ecosystem services are the benefits, closely dependent on biodiversity, which human beings obtain from ecosystems (TEEB).

The FAO emphasizes that both the conservation of biological diversity for food and agriculture and its sustainable use is necessary for providing food, improving people’s economic, social and environmental conditions and meeting the needs of future generations, in particular the rural poor (FAO). According to the Ecosystems For Poverty Alleviation program, managing ecosystems for the services they provide to people, would allow many of the world’s poorest to find ways out of poverty and onto sustainable pathways towards prosperity (ESPA).

Cotton sustainability initiatives have varying emphases and foci, but are commonly aimed at supporting reduction in the use of non-renewable resources, toxic chemicals, meeting compliance with social standards, and encouraging more ethical trade. They are designed to shift “conventional” cotton into various market streams which recognise their contribution to improved sustainability. In response to a growing awareness and concern, there are more “sustainable cottons” on the market than there have ever been before. It is becoming more difficult to refer to “conventional” cotton as one homogenous group.

But just as importantly it’s more difficult to differentiate between the various contributions to sustainability each initiative brings. So last year, Textile Exchange introduced a cotton sustainability continuum, with the aim of communicating the sustainability journey. Along the continuum there are new initiatives, some aimed at reducing impact in mainstream production very quickly, and creating a market for more sustainable cotton. These initiatives include the Better Cotton Initiative, Cotton made in Africa, Cleaner Cotton™, and CottonConnect’s new REEL Cotton (note this is not an exhaustive list).

Initiatives with lower barriers to entry can be a step in the right direction and can play a critical role in improving conventional farming through performance improvement cycles and help in the transition to fairly-traded organic.
part 3
regional insight to organic cotton
photos: (left) bioRe, Tanzania; (left) New Expo, Peru
Africa

Africa is not the largest cotton production region in terms of volume, but it is the place where a very large number of people and families are involved in cotton farming and depend upon it for their livelihoods. That is why cotton production in Africa is linked to many development challenges and opportunities. The presence in Africa of a growing number of cotton initiatives is proof that development organizations are increasingly aware of the role cotton can play in poverty alleviation. This regional insight for Africa focuses mainly on certified organic cotton and organic-fairtrade cotton. There continues to be strong synergies between Fairtrade and organic certification in Africa.

Organic cotton production in Africa is being shaped and influenced by a number of factors including political forces, market demand, and the growing number of newer sustainability initiatives now operating in Africa such as Cotton made in Africa (CmiA).

In most African countries where organic cotton is being produced, the grower groups are usually certified to both organic and Fairtrade standards, particularly in West Africa. Alternatively, as with bioRe in Tanzania, producers may use the Fairtrade standard to guide and audit their internal social and pricing policies and practices.
In 2011-12, organic cotton production in Africa was carried out in six countries; four in West Africa and two in East Africa. East Africa remains the highest contributor with 82 percent of the continent’s fiber produced in Tanzania and Uganda (table 6).

West Africa, however, has the highest number of farmers engaged in organic cotton production. The distribution of the number of farmers and the area planted with organic cotton between West and East looks paradoxical. While 56 percent of Africa’s organic cotton farmers are from West Africa, they account for only 22 percent of the land planted with organic cotton. East Africa represents only 44 percent in terms of farmer numbers, yet 78 percent of planted land.

### Table 6

<table>
<thead>
<tr>
<th>Sub-region</th>
<th>Countries</th>
<th>Number of Producer Groups</th>
<th>Number of Farmers</th>
<th>Number of Women Farmers</th>
<th>Proportion of Women (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Africa</td>
<td>Benin</td>
<td>2</td>
<td>1,590</td>
<td>798</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>Burkina Faso</td>
<td>1</td>
<td>2,688</td>
<td>753</td>
<td>28%</td>
</tr>
<tr>
<td></td>
<td>Mali</td>
<td>1</td>
<td>9,931</td>
<td>3,080</td>
<td>31%</td>
</tr>
<tr>
<td></td>
<td>Senegal</td>
<td>1</td>
<td>192</td>
<td>79</td>
<td>41%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5</td>
<td>14,401</td>
<td>4,710</td>
<td>33%</td>
</tr>
<tr>
<td>South &amp; East Africa</td>
<td>Tanzania</td>
<td>3</td>
<td>7,002</td>
<td>452</td>
<td>6%</td>
</tr>
<tr>
<td></td>
<td>Uganda</td>
<td>1</td>
<td>4,181</td>
<td>1,463</td>
<td>35%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4</td>
<td>11,183</td>
<td>1,915</td>
<td>17%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>9</td>
<td>25,584</td>
<td>6,625</td>
<td>26%</td>
</tr>
</tbody>
</table>

### Table 7

<table>
<thead>
<tr>
<th>Sub-region</th>
<th>Countries</th>
<th>Area Under Organic Cotton Production (ha)</th>
<th>Seed Cotton Production (mt)</th>
<th>Fiber Production (mt)</th>
<th>Bales of Cotton Fiber</th>
</tr>
</thead>
<tbody>
<tr>
<td>West Africa</td>
<td>Benin</td>
<td>1,556</td>
<td>780</td>
<td>328</td>
<td>1,506</td>
</tr>
<tr>
<td></td>
<td>Burkina Faso</td>
<td>2,201</td>
<td>879</td>
<td>370</td>
<td>1,698</td>
</tr>
<tr>
<td></td>
<td>Mali</td>
<td>4,541</td>
<td>2,048</td>
<td>860</td>
<td>3,947</td>
</tr>
<tr>
<td></td>
<td>Senegal</td>
<td>94</td>
<td>44</td>
<td>17</td>
<td>80</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>8,392</td>
<td>3,751</td>
<td>1,575</td>
<td>7,231</td>
</tr>
<tr>
<td>South &amp; East Africa</td>
<td>Tanzania</td>
<td>27,270</td>
<td>16,800</td>
<td>6,891</td>
<td>31,629</td>
</tr>
<tr>
<td></td>
<td>Uganda</td>
<td>3,159</td>
<td>1,170</td>
<td>456</td>
<td>2,092</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>30,429</td>
<td>17,970</td>
<td>7,347</td>
<td>33,721</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>38,821</td>
<td>21,721</td>
<td>8,922</td>
<td>40,952</td>
</tr>
</tbody>
</table>
Africa's production of organic cotton during the 2011-12 season has doubled compared to the volume achieved during the previous season. This high growth of 103 percent was mainly due to the good market price enjoyed by producer groups during the season 2010-11, stimulating planting for the next season. Yields were boosted by the favorable weather patterns during the growing season. At that time, the world’s cotton supply was reduced in part due to the previous year’s unfavorable climatic conditions in some parts of the world, with flooding and drought in a number of big production countries, such as Brazil and the USA. As a consequence, last year (2010-11) volumes of organic cotton in Africa were reduced by 16 percent, giving many of the producer groups the opportunity to sell their accumulated stock.

The top five countries contributing to this sharp growth in Africa were Tanzania (153 percent), Burkina Faso (47 percent), Benin (43 percent), Uganda (36 percent) and Senegal (24 percent). Tanzania alone contributed over three quarters of the total production of the continent.

The price received by farmers always varies from one farm group to another. It also depends on the types of certification they hold, and as mentioned earlier, most of the farm groups are certified both organic and Fairtrade. Therefore, producers qualify for the Fairtrade Organic Minimum Guarantee Price that is fixed for each region according to Fairtrade International’s criteria for each region’s respective development challenges.

The price of organic cotton has been the subject of discussion in many forums recently. Two ways of thinking predominate. The first considers organic cotton as a “value-add” product which therefore should fetch a higher price in the market. The second sees any increase in price as a “price premium” needed only during the first few years after the conversion to organic. In this case, the premium price is viewed as compensation for the lower yield during the first years of conversion. What neither of these views fully acknowledge is the cost of production and a fair return. This is something Fairtrade certification attempts to address.
In Africa, women represent 26 percent of the total number of organic cotton farmers. In East Africa women make up 17 percent of organic cotton farmers, while in West Africa the number of women involved is considerably higher at 33 percent.

The top five countries where women are the most involved are: Mali, Uganda, Benin, Burkina Faso and Tanzania. In contrast to these impressive numbers, women are still cultivating very small plots in comparison to their male counterparts. In most grower associations, even where gender opportunities are being addressed, the culture of the farming communities still considers cotton as a “man’s crop”.

A new report (May 2013) by ActionAid has found a clear and significantly positive correlation between women’s secure land ownership, control or access, and their empowerment, particularly their ability to withstand food crises and fight hunger. It also confirms that empowerment is a non-linear process of change rather than a targeted or defined outcome and involves complex contexts of culture, values, knowledge, relationships, attitude and behavior/practice. The full report can be downloaded here: From Marginalization to Empowerment.

Food security is one key goal of organic cotton farm groups, particularly in Africa. This is confirmed through a recent Textile Exchange survey in which all groups reported that they produce their own food. Crop diversity is encouraged in organic agriculture. As shown in the graph below the number of crops (other than cotton) grown by organic farm groups varies from 7 to 12 on average.

All crops necessary for a balanced diet can be found in the cropping system of these organic cotton farm groups. The number of cereals and tubers (maize, sorghum, millet, fonio, yam and cassava) varies from three to four depending on the farm group. Also, the number of legumes (cowpea, peanut, soya and pigeon pea) and vegetables (okra, tomato, and leafy vegetables) that provide protein and vitamins to the diet are cultivated and maximum numbers in the cropping system can reach four of each type.

Crop diversification is also a prudent strategy for increasing market resilience. If one crop fails or prices drop, other crops can act as a secondary income.
A wide variety of cotton seeds are grown in Africa. Most of them belong to the species *G. Hirsutum*. Due to the policy of growing cotton for export, varieties used have been bred for medium length and for improved yielding ability. In some countries farmers buy their seeds independently and in others all farmers contribute equally to seed production by deduction of an amount of money based on the kg of cotton sold the previous year. For example, in Benin the farmer pay 10 FCFA (USD 0.02) per kg of seed cotton sold. This money is used for the maintenance of the whole cotton sector (including seed multiplication and distribution).

In all African cotton producing countries, the GMO issue is a topic of polarized debate. Stakeholders and civil society organizations who oppose GMOs are actively engaged in monitoring and participating in the debate. Among countries producing organic cotton in Africa, only Burkina Faso has adopted GMO cotton, and Tanzania is researching and running trials.

Seed purity, particularly in Burkina Faso, is becoming an issue because of the risk of contamination in the country. Organic farm groups report that specific seed testing is now carried out to ensure that the seed used for organic farming is free of contamination.

At present, base raw material production is the most developed stage in Africa. The majority of the production is exported due to the lack of processing infrastructure. Nevertheless, there are some initiatives producing finished organic textile products in Africa. Three of the key production facilities are Sunflag in Tanzania, Phenix in Uganda, and One-Way in Kenya. The finished products are mainly for export.

In West Africa, processing initiatives have been undertaken in Benin by the Benin Textile Company (CBT) and in Senegal. Both initiatives are in their early days. Organic handicraft textiles are becoming a growing opportunity for local business development, particularly in Burkina Faso with Biotex and Ivatex supporting local participation. In Mali, Benin, and Senegal, there are also local organic textile and handicraft initiatives underway.

The linkage of farmers to the rest of the supply chain is still weak except where all business partners are integrated into decision making processes, supply security is valued, and the improvement of farmers’ living conditions are considered paramount.
OrganiMark is a privately owned supply chain engineering company based in South Africa, that is working to improve the sustainability of cotton and other crops in southern Africa. A full outline of OrganiMark and their projects can be found in Part 5 of this Report. Here we take a quick look at OrganiMark’s work in organic cotton.

By 2018 OrganiMark hopes to have:

- Established organic fiber production in Mozambique, with a target of 2,000 mt of lint per year.
- Developed a local cotton seed program – cultivar selection and seed multiplication (adapted to local conditions)
- Built capacity through delivery of a training and extension program
- Achieved a fully functional integrated supply chain program intact with a traceability system
- Managed the installation of world class HVI fiber testing technology to conform to international standards for instrument testing so that traditional descriptions of grade and type are replaced with instrument test values, to determine the accurate market value of cotton fiber and to prevent the exploitation of small scale farmers.

In the next season, 2012-13, production of organic cotton will remain similar to the 2011-12 season. Tanzania, Mali and Burkina Faso will continue to play important roles in next year’s production volumes.

A number of farm groups still have stocks of unsold certified organic cotton. For this reason, they will not opt for significant growth of production volumes. If demand and market conditions become more favorable we are fairly certain African organic producers will respond by expanding production.

For information on organic cotton availability please visit Textile Exchange’s Trading Post.
In China, the China National Cotton Reserve Corporation (CNCRC) buys in cotton from growers and sells it on to textile mills at its own discretion. Although farm owners, farmers, and textile mills can trade cotton freely and directly, when the CNCRC puts out a higher purchasing price or a lower selling price than the China market price, then its actions have a direct influence on the rest of the market.

China started planting organic cotton in 2001-02, and the certified fiber output grew quickly, along with the expansion of planting acreage to accommodate the market demand. While growers will always be subject to government influence, if farming groups were better integrated into the value chain it would help ensure that organic cotton farmers could dedicate agreed volumes to a specific supply chain, and prices and quality of organic for the textile chain could become more stable and competitive.

Since Chinese textile mills remain very competitive in terms of cost and quality on the global stage, there are ways to stabilize price and quality to a certain extent despite the government control of cotton prices. This stability is what organizations such as Esquel and Mecilla try to realize and make use of to help expand organic cotton production in China.
Production of organic cotton in China took a 35 percent fall this year from 12,385 to 8,106 mt. There are a number of inter-related reasons for this decline ranging from lack of investment and market demand, through to the challenge of finding high quality non-GMO seed in a GMO-dominated seed market. On the positive side, the government of China, alongside social scientists, farmer representations, and other stakeholders are now recognizing the need to balance their earlier investment in industrial agriculture with regeneration of small-scale traditional farming and support the spread of knowledge of the principles of agro-ecology. The majority of the organic cotton farmers in China are well-organized, with strong certification systems, and produce a high quality fiber. Marrying this efficiency and high standards with concepts of biodiversity conservation and agro-ecology will surely be a win-win for China’s organic community.

### Table 9

<table>
<thead>
<tr>
<th>Location</th>
<th>Number of Farmers</th>
<th>Number of Women Farmers</th>
<th>Proportion of Women (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hefeng</td>
<td>800</td>
<td>480</td>
<td>60%</td>
</tr>
<tr>
<td>Kashi</td>
<td>80</td>
<td>24</td>
<td>30%</td>
</tr>
<tr>
<td>Kuitun</td>
<td>300</td>
<td>30</td>
<td>10%</td>
</tr>
<tr>
<td>Tacheng</td>
<td>813</td>
<td>418</td>
<td>51%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,993</strong></td>
<td><strong>952</strong></td>
<td><strong>48%</strong></td>
</tr>
</tbody>
</table>

### Table 10

<table>
<thead>
<tr>
<th>Location</th>
<th>Area Under Organic Cotton Production (ha)</th>
<th>Seed Cotton Production (mt)</th>
<th>Fiber Production (mt)</th>
<th>Bales of Cotton Fiber</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hefeng</td>
<td>3,000</td>
<td>13,500</td>
<td>5,805</td>
<td>26,645</td>
</tr>
<tr>
<td>Kashi</td>
<td>149</td>
<td>758</td>
<td>325</td>
<td>1,492</td>
</tr>
<tr>
<td>Kuitun</td>
<td>650</td>
<td>3,423</td>
<td>1,470</td>
<td>6,747</td>
</tr>
<tr>
<td>Tacheng</td>
<td>419</td>
<td>1,123</td>
<td>506</td>
<td>2,320</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,218</strong></td>
<td><strong>18,804</strong></td>
<td><strong>8,106</strong></td>
<td><strong>37,204</strong></td>
</tr>
</tbody>
</table>
In China most cotton, including organic, is usually planted by large-scale farm owners, institutes, or companies other than single farmers who typically have limited farmland. The specific challenges for organic cotton planting in China are as follows.

- Difficulty in finding non-GMO cotton seeds.
- Often higher planting costs; 20 percent greater than conventional cotton but with no guaranteed profit payback especially under current Chinese policies for building a cotton reserve.
- Organic certification costs for single farmers with limited financial capabilities.
- The organic cotton price tends to be market-driven, and farmers sometimes are forced to sell their organic as conventional due to uncompetitive price offers.

There is currently a lack of knowledge and support to implement a holistic approach and biodiversity principles in farm production. Farmers are very susceptible to the financial and environmental risks of mono-agriculture. However, as mentioned earlier, this is slowly changing.

China invests in both GMO and non-GMO cotton production. Many Chinese organic farmers rely on seed saving to meet their own seed needs. In Xinjiang, GMO cotton seeds are common and have already become the mainstream in the market. In response, non-GMO cotton could be easily polluted by nearby GMO cotton during pollination.

It is the view of stakeholders in China that while the Chinese government encourages organic cotton planting, they do not provide enough concrete support (for example, incentives through subsidies) nor do they provide policy support on organic cotton seed security. This means the actual planting acreage is predominantly market driven.
more capacity building and investment needed

The major reason behind the dip in production is the Chinese policy for reserve cotton collection which drives up the regular price for upland cotton and narrows the price gap between conventional cotton and organic cotton. Hence, farmers have decreased their organic cotton planting and resorted to growing conventional with the expectation of higher yields and a better profit overall.

In addition, brands and retailers are sourcing less organic cotton in China due to the higher prices compared to, for example, India.

The reduction in organic cotton volumes reflects both organic producers moving away from cotton production (and focusing on other organic crops) and farmers shifting from growing certified organic cotton in favor of conventional. However, it is just as likely that Chinese organic cotton farmers will move away from cotton altogether if the economic value proves to be nonviable. The larger farm owners have the resources to invest in fruit and vegetables, which create much better returns.

To incentivize farmers to grow organic cotton there is a need for better promotional activities and technical guidance from all sectors: private investment, government, NGOs, and of course market demand. First, strong technical support for the whole planting process is needed to improve yield. Second, a clear price advantage for organic cotton is needed to sustain planting. Third, strong market demand is critical to ensure the purchase of organic cotton. There is some brand and retailer investment in the organic cotton value chain in China, but this is also on a limited scale.

The production level will probably stay the same or decrease somewhat in the short to midterm. The future may not be very optimistic for organic cotton in China unless there is more incentive and capacity building for small scale farmers.

According to stakeholders interviewed for this report, the following recommendations were put forward:

- The Government of China could help by giving more priority to organic cotton, such as a planting subsidy or support policy.
- The excellent physical, performance, social, and environmental properties of organic cotton could be better recognized and, thus, supported by well deserved, higher prices.
- It would be beneficial if NGOs could create more effective links between farmers and enterprises, support the process of marketing and promotion, and advocate favorable government policies to benefit farmers.
- As organic cotton planting is eco-friendly and prevents pollution, consumers need to be made more aware of the concept and be willing to pay a price for organic products that reflects this investment.
EMENA & CA
(Europe, Middle East, North Africa & Central Asia)

The EMENA & CA region includes 13 cotton producer countries and represents a rather small part of the global production. In 2011-12, three countries of the European Union (Greece, Spain and Bulgaria) were producing cotton representing 1.3 percent of the global production. North Africa suffered a socio-economic crisis in 2011-12 with the 2011 Arab Spring. The 4 cotton producer countries of this area are Turkey at 2.8 percent, Syria at 0.7 percent, at Egypt 0.6 percent, Israel at 0.1 percent, Tunisia and Morocco a minuscule production share at the global level. The bigger producer countries of the region are located in Central Asia. The global conventional production share per country has been 3.4 percent in Uzbekistan, 1.1 percent in Turkmenistan, 0.5 percent in Tajikistan, 0.4 percent in Kazakhstan, and 0.1 percent in Kyrgyzstan.

European, Middle East, North African and Central Asian countries producing organic cotton in 2011-12 were: Egypt, Israel, Kyrgyzstan, Syria*, Tajikistan, and Turkey. Data from each country is aggregated here. However, due to their very different characteristics, each country warrants an individual review.

![chart 16](chart_16.png)

Organic cotton fiber production (mt)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>11,201</td>
<td>15,200</td>
<td>26,481</td>
<td>53,780</td>
<td>50,491</td>
<td>32,653</td>
<td>27,611</td>
<td>16,464</td>
</tr>
</tbody>
</table>

*Note: Data for Syria includes only 2011-12 due to the political situation in 2011.
Syria has historically been the largest producer of organic cotton in this region. Due to current civil unrest, the leading producer is now Turkey which saw a large increase during the 2011-12 season. The two HELVETAS Swiss Intercooperation-initiated organic cooperatives in Kyrgyzstan and Tajikistan have both seen steady progress. Overall reported production in Kyrgyzstan has declined due to an external contract farming operation no longer reporting production. Meanwhile the BioFarmers project in Kyrgyzstan continues to thrive as does the Tajikistan cooperative, Bio Kishovarz, with more and more farmers wishing to join. The Turkish South East Anatolian regional development program in the GAP region enters its next phase with farmer training and capacity building being the key focuses. The majority (65-70 percent) of Turkey’s organic cotton (approximately 10,000 mt) is now grown in the Southeast.

### Table 11

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Producer Groups</th>
<th>Number of Farmers</th>
<th>Number of Women Farmers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>no data</td>
<td>250</td>
<td>125</td>
</tr>
<tr>
<td>Israel</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>1</td>
<td>610</td>
<td>130</td>
</tr>
<tr>
<td>Syria</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>1</td>
<td>19</td>
<td>6</td>
</tr>
<tr>
<td>Turkey</td>
<td>23</td>
<td>394</td>
<td>no data</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>1273</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Table 12

<table>
<thead>
<tr>
<th>Country</th>
<th>Area Under Organic Cotton Production (ha)</th>
<th>Seed Cotton Production (mt)</th>
<th>Fiber Production (mt)</th>
<th>Bales of Cotton Fiber</th>
</tr>
</thead>
<tbody>
<tr>
<td>Egypt</td>
<td>294</td>
<td>1,103</td>
<td>420</td>
<td>1,928</td>
</tr>
<tr>
<td>Israel</td>
<td>55</td>
<td>200</td>
<td>70</td>
<td>321</td>
</tr>
<tr>
<td>Kyrgyzstan</td>
<td>233</td>
<td>440</td>
<td>156</td>
<td>716</td>
</tr>
<tr>
<td>Syria</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
<td>no data</td>
</tr>
<tr>
<td>Tajikistan</td>
<td>60</td>
<td>47</td>
<td>16</td>
<td>73</td>
</tr>
<tr>
<td>Turkey</td>
<td>12,131</td>
<td>42,651</td>
<td>15,802</td>
<td>72,531</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,773</strong></td>
<td><strong>44,441</strong></td>
<td><strong>16,464</strong></td>
<td><strong>75,570</strong></td>
</tr>
</tbody>
</table>

**Footnote:**
- No data from Syria (production continuing, but no export due to civil unrest)
Egypt

The Egyptian organic cotton industry is closely connected to the Egyptian biodynamic agricultural movement led by Dr. Abouleish of SEKEM (the Egyptian biodynamic food, pharmaceutical and textile company). This modern biodynamic agricultural movement started in 1977 on desert land near Belbeis.

Egyptian organic/biodynamic cotton farmers tend to grow independently yet feed their cotton into the SEKEM value chain. In 2011-12, there were an estimated 250 organic cotton farmers growing organic cotton in Egypt. The seed cotton production is estimated to be in excess of 1,100 mt which represents a decrease on last year’s production. In contrast with the forecasted drop in conventional cotton production in 2012-13, an increase in production is forecasted for organic cotton.

The organic cotton is grown alongside food crops as well as other cash crops. As with conventional cotton, the majority of organic cotton in Egypt is irrigated. Almost 95 percent of the water comes from outside of the country and there is an increased awareness that climate change impacts elsewhere could affect the availability of water in Egypt. Because of the role that soil organic matter plays in sustainable agriculture, organic agriculture has recently gained importance as an alternative farming system. Read more about this [here](#).

Israel

Israel is only a small producer of cotton; with about 12,000 ha under Pima (Extra Long Staple). Cotton in Israel is drip irrigated with recycled water. According to the Israeli Cotton Board, in 2011-12 there were five farmers, producing 70 mt of organic ELS fiber on about 55 ha of land, certified by Agrior. There are no spinning operations in Israel, therefore, all cotton is exported and marketed exclusively through the German company Otto Stadtlander GmbH in Bremen.

Kyrgyzstan

In 2003, the Swiss State Secretariat for Economic Affairs (SECO) together with HELVETAS Swiss Intercooperation (HSI) and the Humanist Institute for Cooperation with Developing Countries (Hivos) initiated the Organic Cotton Production and Trade Promotion Project in Kyrgyzstan with the project goal: “To promote organic farming in Central Asia and the trade of organic cotton and other organic products in international and domestic markets, allowing interested farmers to make their living.”

Organic farming in Kyrgyzstan has proven itself to have both social and economic benefits. As well as providing work opportunities and improving livelihoods, organic farmers are improving the soil fertility of their farms, looking after their health, and receiving a fair price with a premium for their products. There are more than 1,200 small holder farmers in the Bio Farmer Cooperative, 22 percent of them are women. In order to empower women’s groups, a new handicraft value chain project is being explored with the support of the local HELVETAS Swiss Intercooperation in Kyrgyzstan.

In 2012, the project entered its third phase (2012-16). During this phase the project will carry on its work to support the emerging organic sector as well as local market development. For more information visit: [Organic Farming](#)

Note: Production from the BioFarmer project in Kyrgyzstan has shown a steady growth since the project’s inception. The reason for the decline at the country-level is caused by an external contract farming operation no longer reporting production.
Syria

Cotton is planted in the northern, eastern, and central parts of Syria. Syria has been producing organic cotton since 2006 in the Aleppo area. Syria’s 2011-12 cotton crop was estimated at 16,000 mt of fiber (not included in the global figures), smaller than the previous year which was clearly due to the disruption caused by the political situation. According to the initial agreement between the grower group and Mavideniz, farmers will continue to grow organic, but official external inspection will only be resumed after the situation is safe. We hope to bring more information on Syrian organic once the country is stable again.

Since the beginning of the uprising, the organic certificate has been frozen, and there is no indication as to when fiber exports will resume. Inspection are still being conducted to check the status of the fields in the hope that trade in organic production will help bring business back to Syria. Our Syrian colleagues do not want to be forgotten by the organic community and hope that all who read this Farm & Fiber Report will consider supporting them in any way they can once the situation is resolved.

Tajikistan

The recent HELVETAS Swiss Intercooperation-initiated organic cooperative “Bio Kishovarz” in Tajikistan currently produces 16 mt of certified organic fiber and 220 mt of in-conversion organic. For 2012-13, Bio Kishovarz is expecting to expand to 100 mt organic and a further 800 mt in-conversion. Tajikistan is capable of growing superb extra long staple fiber (up to 40mm), and with the right market support is set to explore this new business opportunity.

Bio Kishovarz and the SughdAgroServ (SAS) are establishing a seed farm to provide farmers with high quality seeds and to protect organic cotton from GMO contamination. Up to now, no GMO cotton has been observed in Tajikistan.

The agricultural sector of the Sughd region is still informally ruled by local governance, which decides upon farmers’ production, and operates the processing companies, to which farmers are often indebted. Bio Kishovarz and its partners aim to empower farmers to use their right of “freedom to farm” and to help farmers overcome their debts to local processors.
Organic cotton production in Turkey started at the end of the 1980’s, predominantly in the west (Aegean around Izmir) and quickly expanded to place Turkey in second place globally in terms of fiber production volume. Since 2000, the production area has shifted to South East Anatolia (SEA region). This trend is mainly due to the influence of the UNEP sponsored “GAP Project”, which seeks to decrease the flow of seasonal workers from east to west during the summer months in order to create more stable employment. This situation has unfortunately created a labor shortage in the western areas of the country to manually harvest the organic cotton.

Moreover, the drop in global cotton prices in 2007 and 2008 emerged as another factor decreasing cotton production in western Anatolia. The recent upward trend in prices over the last two years, however, has rejuvenated organic cotton production both in the west and SEA region. But, current prices for organic cotton are not enough to satisfy the farmers, especially in the west of the country where they have alternative crop choices like tomatoes and paprika. In addition, the introduction of mechanical harvesting is not necessarily suitable for western organic Turkish farmers who have only small-scale cotton fields.

Approximately 30-35 percent of Turkish organic is produced in the Aegean region with the rest being produced in the SEA and SA region.

Aegean cotton is superior to SEA cotton in terms of color, fiber strength, and its capacity to retain color. This difference in quality is reflected in the price as an additional 750 TL/mt (408 USD/mt) for Aegean cotton compared to SEA cotton. Cotton from the Bergama and the Tire regions (Aegean region) with its rare white color and fiber strength is regarded as the world’s highest quality cotton, second only to Egyptian (Alexandria) cotton. For combed, ring spun cotton Aegean is ideal whereas SEA (Şanliurfa, Mardin and Diyarbakir) is suitable for open end spinning.

Due to the political unrest and civil war in Syria over the past two years, the amount of organic cotton Turkish companies have been importing has seen a drastic decrease. This downward trend is expected to continue in 2012. Moreover, Kyrgyzstan, which has been an attractive source of imports for Turkey, is no longer a key source of organic cotton imports due to its increased domestic market prices. Due to the much protected GMO-free status of Turkey, the occasional imports from India are decreasing due to the perceived risk of GMO contamination.
Latin America

Latin America is an important region for cotton and textiles, with Brazil standing out as one of the world’s biggest cotton producers and fifth largest textile manufacturer (ABIT). Also important to the region are Argentina, Colombia, Mexico, Paraguay and Peru. Most countries produce cotton from genetically modified varieties, with the exception of Nicaragua and Peru. It is estimated that Latin America has 939,107 ha of genetically modified cotton and produces around 383,297 mt of fiber (for the references see appendix b).

Several challenges during the year hit Latin America and the Caribbean, especially those arising from the international economic situation; however, good macroeconomic management in some countries of the region has helped them to withstand the effects of regional and global situations. In this context, cotton production has remained relatively stable, except for the effects of weather in some countries.

Unfortunately, Paraguay and Brazil were affected by the severe drought, which affected their performance and production. During this time, Paraguay joined up with other countries in the region to use GMO seeds. This spread of GMO into Paraguay is a great concern for companies working with organic cotton. Alongside the local NGOs, farmers are working hard to protect their investments against the possible effects this could have on organic cotton production.

In Mexico there are efforts to start a chain of organic cotton companies. Mexico is also importing for domestic cut and sew of organic cotton apparel for export market.
According to research from Embrapa (Brazil’s Agricultural Research Corporation), organic production in semi-arid areas generates many benefits to farmers such as income diversity from associated production and better prices. Some Brazilian organic cotton producers have been certified for organic cotton intercropping. Moreover, the Agro-ecological Cotton Network of Semi-Arid Farmers continues its consolidation and development process leading to improved organic cotton production systems. In Paraguay, Aratex is a leader in organic cotton, likewise is COPROEXNIC in Nicaragua. In Peru, Bergman Rivera, Ecotton, New Expo, Textil Piura and Oro Blanco are stable companies with good robust organic projects.

In 2011-12, Latin America reported a production of 738 mt of organic cotton fiber, generated from 1,951 mt of seed cotton varieties (Table 17). There were 1,186 farmers involved, of which 219 were women. Planting extended over a total area of 1,438 ha. This season was characterized by a marked reduction in Brazil due to drought in the Northeast and a decline in production in the valley of Piura.

In summary, the production of organic cotton fiber in Latin America has suffered a slight decline. By 2013 the situation is expected to remain stable. Improved climate in Brazil and Paraguay will certainly help, as will improved market conditions favoring the price of the fiber.
In Brazil, organic cotton production was 37.8 mt of fiber. There were 371 families involved in the farmers’ network, including two women on the processing side. The total area planted was approximately 57.1 ha; this is a decline in volume for the Brazilian organic farmers due to the drought in the northeast which affected production.

The Association of Ecological Producers of Nicaragua (APRENIC) resumed growing organic cotton, using the national variety Melba, produced in the CEO (Centro de Investigación Agrícola). However, exports to Germany ceased due to the presence of pests in their organic cultivation. APRENIC sow about 140 ha annually with a yield of approximately 25 quintals (1,224 kg) of seed cotton. COPROENIX ginned the raw cotton in their factory (located in the city of Sandino) and sold the fiber obtained. Scarcity of financial investment is the main challenge for this group.

This season, COPROEXNIC produced a total of 122 mt of organic cotton fiber (which is recorded as the total production of the country), 80 mt over the production of 2010-11. There are 41 families involved in production, with the participation of six women, and sowing extended over an area of 258 ha. As a cooperative promoting and commercializing organic products, COPROEXNIC also markets other organic crops such as sesame.
This season, the Aratex organic cotton project, produced a total of 100 mt of organic cotton fiber (50 mt over the previous year). There are approximately 600 families, including 180 women, involved in organic cotton farming. The total sowing area this season was 500 ha.

An important aspect of the Arasy program in Paraguay is the commercial rotation with sesame. This strategy (cotton-sesame) was so important in 2011-12 that it produced a 30 percent share of national sesame production. Arasy, with a good number of customers in Japan and Europe, exports a significant share of Fair Trade certified sesame. Arasy is expected to expand organic sesame production to between 8,000 and 12,000 mt.

A total of 174 families are involved in organic cotton production in Peru (154 less than the previous season), with a total of 31 women involved. For the 2011-12 season the farmers sowed 623 ha, seed cotton production this year was 1,236 mt, and there was an estimated production of 478 mt of fiber. Both the number of families involved and the planting and seed production suffered a decline from that of the previous season. See next page.

In Latin America there are four companies that certify organic cotton, one company that conducts certification of a “fair price”, and three that provide certification to GOTS. In Argentina the GOTS certification is conducted by OIA. In Brazil organic cotton is certified by IBD. In Nicaragua the organic certification is by Mayacert. In Paraguay IMO handles the GOTS organic certification, and in Peru Control Union certifies to both organic and GOTS standards.

Prices of organic raw (seed) cotton are usually based on conventional prices. According to the contractual relationship, prices are established with percentage premium clearly differentiated and can vary between 5 to 20 percent of conventional prices. There are various factors that determine the final price. This information is usually confidential between companies due to competition and market fluctuations.

In countries such as Argentina, the textile industry has restrictions on imports that are meant to favor the local textile industry. This situation has also helped the organic garment industry locally.

In Peru, the price of raw cotton on the Peruvian coast fluctuated between 108 and 124 soles/quintal (approximately 43.2-49.6 USD/quintal). However, as stated earlier, it is the international conventional cotton price which predominantly determines the local organic cotton prices.
The value chain and the market

Latin America exports virtually no organic fiber; most of the fiber is used by local companies. In Latin America the textile chain is well established within the domestic scene; including producers, ginners, spinners, knitters, sewers, and marketers of the final product. This chain is however still subject to the changes in the international market (price of cotton) and fashion, as well as the economic characteristics of each country, bilateral and multilateral treaties, and the importation of fiber or products (e.g. from India or China).

Organic cotton production models are closely linked to the export market. The production company (or farmer group) operates with in a series of relationships, often complex, with the private sector, textile industry, and the participation of NGOs and government organizations.

Argentina produces organic textiles with imported cotton, mainly for the domestic market. They are relatively new players in organic. Among the new organic initiatives, the most relevant have been driven by the Fairtrade organization Otro Mercado del Sur.

Brazilian organic fiber is produced mainly for the domestic market, although in some cases it makes its way into the supply chains of international brands such as the French footwear company Veja. Local companies include Justa Trama, CoopNatural, and Malhas Martins, and they acquire their fiber from established networks of organic farmers. These networks, the Don Helder Camara project (PDHC) for example, are supported by private organizations, NGOs, and government.

In Nicaragua the agricultural export cooperative, COPROEXNIC, manage the sales of organic cotton lint for Aprenic, the local organization of producers. In Paraguay, the textile company Aratex Organic works with local farmers and consumes the majority of organic cotton produced. This company has its own marketing channels, mainly oriented to the European market.

Companies involved in organic cotton in Peru remain committed (i.e. Bergman Rivera, Ecotton, New Expo, Oro Blanco and Textil Piura). Additional players include other local businesses such as Art Atlas, Franky y Ricky S.A., Inca Tops S.A., and La Colonial Fca. De Hilos S.A.

Production continues to decline in Peru, due mainly to the import of subsidized cotton. This reduction occurred between the 2006-07 and 2010-11 growing seasons when cotton imports increased from 32,000 to 66,000 mt, while in the same period, production fell from 79,000 to 44,000 mt. In 2012, the Textile Committee Chairman of the SNI (National Society of Industries) announced that the domestic textile industry could buy 100 percent of the cotton produced in Peru, as a measure to support the revival of Peruvian cotton. But, in late 2012, the Ministry of Agriculture (MinAg) announced that the producers of Piura could export their specialized Pima cotton again to the international market.
In Latin America it is estimated that the production of organic cotton in 2012-13 will remain fairly stable. Under favorable growing conditions, organic cotton fiber volumes are expected to reach in excess of 800 mt. The total area of sowing is expected to cover 1,370 ha, this will depend on the climatic conditions, the market, the effect of any increase in GMOs, and the strength of the relationships between the companies. If conditions are favorable, this amount could be increased, especially in Brazil and Paraguay. Since production in 2010-11 was a little higher at 2,306 mt seed cotton (901 mt of fiber), so too could be the production in 2012-13 if weather conditions improve. Farmers are looking forward to a year without drought and with fewer pests!

The effect of the reduction in conventional cotton in some countries may have an impact on organic. For example, it is estimated that in Peru the planting of cotton will be reduced by 34 percent compared to last season, that equates to about 30,000 ha. Jose Ignacio Llosa, Textile Committee Chairman of the National Society of Industries (SNI), revealed that due to producer subsidy reductions, which were announced by the Ministry of Agriculture (MINAG), production is expected to fall yet another 30 percent for the next season. This puts tremendous pressure on the local textile industry. The State however, announced that they will promote the planning, monitoring and evaluation of the 2012-13 season, with the creation of the Ministerial Resolution N° 0204-2012 in the cotton crop. Strategic alliances are an increasingly important resource in this regard, for example Arasy in Paraguay has established a series of strategic alliances to address cotton production and become more competitive in 2013.

In conclusion, the conventional cotton situation, increased GMOs and agricultural policies will directly influence the development and resilience of organic cotton programs in Latin America. A priority for the coming year is to implement programs to secure organic seed supply. A good supply in seed adapted to the growing conditions is indispensable to maintain the quality of the fiber in organic systems. It is also necessary to create GMO-free areas in the countries growing Bt cotton (Brazil, Colombia, Mexico, Paraguay, Argentina). Peru and Nicaragua (for now) are Bt cotton-free with the support of organizations monitoring GMO crops. GMO-free areas are indispensable to prevent contamination of the fields and to protect organic cotton production.
India

Cotton continued to play a big role in India’s agronomy and economy in the year 2011-12. India had the largest acreage under cotton in the world (34 percent of global acreage) and is the second largest fiber producer. In 2011-12 India’s cotton production grew from 11.14 million ha in 2010-11 to 12.17 million ha, an increase of 10 percent which clearly demonstrated the Indian farmer’s faith in cotton.

Production of cotton correspondingly rose from 325 lakh bales (32,500,000) in 2010-11 to 353 lakh bales (35,300,000) in 2011-12 (one Indian bale equals 170 kg of lint). (Cotton Advisory Board)

India’s cotton growing area is classified into three zones as follows:

- Northern Zone comprising Punjab, Haryana and Rajasthan.
- Central Zone, comprising Gujarat, Maharashtra, Madhya Pradesh and Andhra Pradesh.
- Southern Zone, comprising Karnataka and Tamil Nadu to which Odisha has more recently been added.

The three major zones vary from each other with respect to soil, irrigation, topography and in their preference for cotton types. The North Zone has alluvial soil, access to irrigation on over 90 percent of the acreage, and prefers growing *G. Hirsutum* and *G. Arboreum*. The Central Zone has black soil, only about 10 -15 percent irrigation, and grows *G. Hirsutum*, *G. Arboreum*, and *G. Herbaceum* and *Intra Hirsutum*. The South Zone has both sandy and red soil, access to irrigation on over 30 percent and grows all four types of cotton including *Intra Hirsutum* Hybrids. (Directorate of Cotton Development, Mumbai)

These ten states grow most of India’s cotton. The Central Zone, comprising of Maharashtra, Madhya Pradesh and Gujarat, is the largest cotton grower, accounting for almost 65 percent of India’s cotton area. The bulk of organic cotton growing is done in the two states of Madhya Pradesh and Maharashtra.
While cotton in general seemed to be on an upswing, it was a challenging year for organic cotton. It was reported that some producer groups were struggling to keep their commitment to growing organic cotton amidst existing and emerging challenges. Despite their conviction that organic cotton offered an alternative, more sustainable option for marginal small holder farmers, producer groups felt that there was considerable room for improvement. More support for organic cotton growers is necessary in these challenging circumstances. Farmers mentioned a need for better prices for organic cotton, more commitment from the industry, more support from the policy makers for organically grown cotton and an urgent need to address some of the key issues affecting organic cotton such as shortage of non-GMO seeds and contamination issues arising from the high growth of GMO cotton in India. Dealing with the costs and efforts of third party certification was also seen as a major effort.

The year 2011-12 also saw third party certifiers and producer groups having to comply with the requirements of entering all records on Tracenet, an online traceability system that was made mandatory in mid 2011 by APEDA, the accrediting body of the Indian Ministry of Commerce that oversees third party certification and agricultural product exports. This also contributed to an increase in overheads.
It is estimated that India grew organic cotton in an area of 253,161 ha, producing 103,004 mt of organic cotton lint. This constitutes roughly two percent of India's cotton acreage. Though small, it is still a very significant and critical percentage.

Our stakeholders tell us that there was no dramatic difference in the acreage. Madhya Pradesh, despite a small drop, continued to have the highest acreage. Maharashtra follows, though with a fairly significant rise mostly on account of the 2010-11 addition of conversion acreage. Rajasthan has emerged the third largest producer with a significant increase, followed by Odisha. Maharashtra and Madhya Pradesh together constitute 78.7 percent of India's organic cotton. Organic cotton is grown in the states of Andhra Pradesh, Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, and Tamilnadu. The majority, 70 percent, of all organic cotton farmers are located in Madhya Pradesh and Maharashtra.

### Table 15: India Organic Cotton Profile 2011-12

<table>
<thead>
<tr>
<th>State</th>
<th>Number of Producer Groups</th>
<th>Number of Farmers</th>
<th>Farmer Distribution (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>3</td>
<td>5,500</td>
<td>3%</td>
</tr>
<tr>
<td>Gujarat</td>
<td>10</td>
<td>18,350</td>
<td>10%</td>
</tr>
<tr>
<td>Haryana</td>
<td>2</td>
<td>1,820</td>
<td>1%</td>
</tr>
<tr>
<td>Karnataka</td>
<td>4</td>
<td>1,840</td>
<td>1%</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>44</td>
<td>90,500</td>
<td>49%</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>21</td>
<td>38,000</td>
<td>21%</td>
</tr>
<tr>
<td>Odisha</td>
<td>9</td>
<td>16,500</td>
<td>9%</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>3</td>
<td>3,500</td>
<td>2%</td>
</tr>
<tr>
<td>Tamilnadu</td>
<td>4</td>
<td>8,019</td>
<td>4%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>184,029</strong></td>
<td></td>
</tr>
</tbody>
</table>

### Table 16: India Organic Cotton Production 2011-12

<table>
<thead>
<tr>
<th>State</th>
<th>Area Under Organic Cotton Production (ha)</th>
<th>Seed Cotton Production (mt)</th>
<th>Fiber Production (mt)</th>
<th>Bales of Cotton Fiber</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>3,625</td>
<td>4,469</td>
<td>1,475</td>
<td>6,770</td>
</tr>
<tr>
<td>Gujarat</td>
<td>4,690</td>
<td>5,783</td>
<td>1,908</td>
<td>8,760</td>
</tr>
<tr>
<td>Haryana</td>
<td>7</td>
<td>8</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>Karnataka</td>
<td>74</td>
<td>91</td>
<td>30</td>
<td>138</td>
</tr>
<tr>
<td>Madhya Pradesh</td>
<td>126,165</td>
<td>155,553</td>
<td>51,333</td>
<td>235,618</td>
</tr>
<tr>
<td>Maharashtra</td>
<td>73,124</td>
<td>90,157</td>
<td>29,752</td>
<td>136,560</td>
</tr>
<tr>
<td>Odisha</td>
<td>16,540</td>
<td>20,392</td>
<td>6,729</td>
<td>30,888</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>27,594</td>
<td>34,022</td>
<td>11,227</td>
<td>51,533</td>
</tr>
<tr>
<td>Tamilnadu</td>
<td>920</td>
<td>1,134</td>
<td>374</td>
<td>1,715</td>
</tr>
<tr>
<td><strong>Others</strong></td>
<td><strong>423</strong></td>
<td><strong>522</strong></td>
<td><strong>172</strong></td>
<td><strong>790</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>253,161</strong></td>
<td><strong>312,131</strong></td>
<td><strong>103,004</strong></td>
<td><strong>472,786</strong></td>
</tr>
</tbody>
</table>

Footnote: Please see Appendix B for an important note on our data collection strategy for 2011-12.
As customary, the Government of India announced the Minimum Support Price (MSP) for cotton, for this season (2011-12) it was set at Rs 2700 per quintal for medium staple and Rs 3300 per quintal (one quintal = 100 kg of seed cotton). Estimates of cost of cultivation and cost of production are made by the Ministry of Agriculture, more specifically the Commissioner for Agricultural Costs and Prices (CACP). The Commission also takes into account other factors such as supply and demand, domestic and international prices, inter-crop price parity, terms of trade between agriculture and non-agriculture and cost of living. The MSP therefore serves as the benchmark price for a commodity.

The Cotton Corporation of India (CCI) continues to offer a safety net for its cotton farmers, a role that some countries consider an indirect subsidy. Owned by the Government of India, the CCI is a cotton trading company that has been functioning for the last three decades. CCI has about 315 procurement centers in the country and is present at all the market yards to ensure cotton farmers get a fair price. CCI does not speculate and attempts to offer cotton to the industry at fair prices, thus serving as a link between farmers and the market. As per the mandate, set in MSP operations, CCI purchases the entire quantity offered to it by the cotton farmers at APMC market yards, without any quantitative restrictions. The losses of the CCI, if any, are reimbursed by the Government.

According to the Ministry of Textiles, the cotton season 2010-11 was a unique year in the history of the cotton economy of the country for the unprecedented volatility in the prices of both raw cotton and lint. The first half of the season, cotton prices reached a record high and then dropped substantially. In January 2011 the price of Shanker 6 (a popular variety) was Rs 62000 (USD 1,130) per candy (356 kg) and by July 2011 it dropped to Rs 29500 (USD 538) per candy. This was mainly due to a historically tight world opening stock-to-use ratio, a slowing demand, difficulties in accessing credit by the cotton spinners, and declining prices of cotton yarn. In 2010-11, the prevailing cotton commodity prices rose above the MSP level throughout the season (Ministry of Textiles).

As in previous years, the prices of organic cotton were based on the prices of conventional cotton. It was difficult to accurately estimate the price range of organic cotton in 2011-12. Some of the more committed producer groups appear to have offered an increase of 8 to 12 percent over conventional cotton prices for organic and an increase of about five percent for in-conversion fiber, especially where there were written contractual agreements. However, the global economic situation resulted in a modest demand situation from the market; with a resulting reluctance from buyers to pay any more than a marginal increase for organic over conventional. At yarn level, organic was perhaps slightly more profitable at about a seven percent increase over conventional, but the majority of producer groups reportedly received only about three to five percent at fiber level. This was an all time low for organic cotton prices in India. Some producer groups stated that sometimes markets demanded the same price for organic as conventional.
India is the only country in the world to commercially grow all the four major cultivated species of cotton; *Gossypium Arboreum*, *G. Herbaceum*, *G. Hirsutum* and *G. Barbadense*. The first two are considered old world cottons, while the latter two are referred to as new world cottons. *G. Hirsutum*, also known as American cotton or upland cotton is now the most dominant species globally. *G Barbadense* is known by many names, commonly Egyptian cotton or Peruvian cotton. The distribution of cotton types has undergone significant changes in India since the time of independence in 1947.

The Indian Government actively governs the seed sector. Major restructuring was done in three phases from 1971 to 1991 through national seed projects to strengthen the seed infrastructure. However it was the introduction of the New Seed Development Policy in 1988-89 that transformed the Indian seed industry. The policy opened up big investments by private individuals, Indian corporations and multinational companies in the Indian seed sector with a strong R&D base for product development. This resulted in an emphasis on high value hybrids of cereals and vegetables and paved the way for investments in technology driven seeds such as Bt cotton. (Bt cotton contains genes from *Bacillus thuringiensis* that make the plant resistant to the cotton bollworm complex). The seed sector is now market driven and the focus of the private seed companies has been on the high value low volume seeds, such as vegetable seeds, planting material of horticultural crops, maize, sunflower and cotton. Cotton is now driven by the Bt agenda.

As per the norms governing seeds in India, special attention is supposed to be given to the need to upgrade the quality of farmers’ saved seeds through interventions such as the Seed Village Scheme. These interventions can promote and facilitate production and timely availability of seed of desired varieties at the local level. Special emphasis is also required to be given to seed multiplication for building adequate stocks of certified, quality seeds by providing foundation seed to farmers.

India has established the Protection of Plant Varieties and Farmers Rights (PPV&FR) Authority, under the Protection of Plant Varieties and Farmers Rights Act, 2001. PPV & FR Authority has been operational since November 11, 2005.

Some of the key objectives of the Authority are:

- Establishment of an effective system for protection of plant varieties and to encourage development of new varieties of plants.
- Recognition and protection of the rights of farmers in respect to their contribution in conserving, improving and making the available plant genetic resources for the development of new plant varieties.

It is a pity that despite all the above existing norms and guidelines the current non-Bt seed availability crisis in India has come to pass and that the needs of thousands of non-Bt cotton farmers are ignored. It is little consolation that the seed issue confronting India is not unique, but a global problem that needs dialog, investment, and sustained efforts. Given the stakes, now is the time for immediate action from all stakeholders.
There has been an unprecedented growth of Bt cotton in India with acreage growing from three percent in 2002-03 to about 90 percent in 2012. The number of Bt cotton hybrids as well as the number of companies offering Bt cotton hybrids in India had increased tremendously from 2002 to 2010 when it was first commercialized. In 2010, the number of Bt cotton hybrids increased to 780 from 131 in 2007. In 2010, 34 companies and one public sector institution undertook the marketing of those hybrids in three cotton-growing zones. (Source ISAAA Report, Bhagirathi Kaur and BK Choudary, Celebrating Ten Years of BT in India.)

Despite the increasing dominance of GMO in India, there are growing concerns. In March 2012 Hindustan Times carried a story titled “Ministry blames Bt Cotton for Farmer Suicides”. The hard hitting article spoke of India’s Bt cotton dream going “terribly wrong” and stated that “for the first time farmer suicides have been linked to the declining performance of the much hyped GMO variety adopted by 90 percent of the country’s cotton growers since being allowed a decade ago”. The article also spoke of a January 9, 2012 Advisory from the agriculture ministry. The Advisory reportedly presented a grim scenario:

“Cotton farmers are in a deep crisis since shifting to Bt cotton. The spate of farmer suicides in 2011-12 has been particularly severe among Bt cotton farmers. Rising costs and yields and returns that do not match the promise have reportedly pushed farmers to the brink, financially and otherwise and sparked off a spate of farmer suicides in the Vidharba region. Simply put, Bt cotton is no more as profitable as it used to be” said the Advisory, according to the press report.

The Advisory was later played down according to the Hindustan Times, with key figures in the Agriculture Ministry declining to comment and even declining knowledge of the Advisory.

Current debates about Bt cotton range from the “farmer knows best” theory that defends the wide scale adoption of Bt cotton in the country, to detractors denying that the high adoption alone was responsible for India’s rising yields. The biggest rises they point out were from 2002-03 to 2004-05 when yields rose from 302 kg lint per ha to 470 kg lint per ha, when only 5.6 percent of India’s farmers had adopted Bt. The yield per ha has been going down steadily from 554 kg lint per ha in 2007-08 to a projected 498 kg per ha for 2012-13.
The organic cotton producing community has its own issues and concerns with the high GMO acreage in India.

With 90 percent of cotton being Bt, there is of course a concern for the growers of non-Bt who do not want their crop and seeds to be contaminated. Third party certifiers specify a 50 meter buffer zone to control contamination. In practice it is hard to comply with, as many of the land holdings are very small, usually not more than two to three ha.

When Bt was introduced, as part of the Integrated Pest Management strategy, and as a means to control contamination, the Genetic Engineering Assessment Committee (GEAC) mandated the planting of refugia. The same non-Bt hybrid was to be planted at the periphery of the Bt cotton field, equivalent to five rows or 20 percent of the total sown area whichever is higher. “This requirement is not being followed by a sizeable number of farmers” says a 2006 report of the Indian Ministry of Environment and Forests, a Sub Committee on Bt Cotton and related issues.

With reference to refugia planting, non-Bt cotton seeds were supplied with the Bt seed packet that was bought by the farmer. This was an additional non-remunerative job for the Bt farmer which he soon dropped; the government has no means to regulate or check if this is being done. As in many developing countries the ability of the Indian government to effectively enforce regulations is relatively weak with many of the prescribed safeguards only on paper.

With both public and private sector companies not producing enough non-Bt seeds even to supply as refugia for Bt, this practice has also come to a halt, and food grains are being supplied in the place of non-Bt cotton seeds.

The certification bodies have controls in place for detection of contamination, such as examination of seed source, checking when the crop is standing and random fiber testing. However these systems are not completely foolproof. The issue of contamination has huge ramifications for India, ranging from biodiversity to the seed sovereignty of the farmers.
The scarcity of good quality non-Bt seed started emerging as a challenge to organic cotton farming about four or five years ago. The problem was later compounded when the public sector seed companies joined the private sector in focusing on Bt seeds. Production of Bt seeds was more lucrative as they sold from Rs 750 to about 1450 per packet of 450 grams in different states depending on state government policy.

Producer groups claimed that even three years ago it was a struggle to source good seeds, but they were still able to access them from good companies as they were producing some quantities for the purpose of refugia for the Bt seed packets. The response to this limited availability ranged from frustration and helplessness to anger.

When the private and public sector sources started drying up for non-Bt users, some producers needed to innovate and look after their own seed needs. They were also quick to sense that this adverse situation could turn into an opportunity for self reliance. Notable examples are Chetna, Pratibha, EcoFarms, and BioRe, which have led sincere initiatives since 2009 to redress the situation.

Chetna has collaborative programs for non-Bt seed production with the University of Agricultural Sciences (UAS) Dharward, FiBl, bioRe, CICR Nagpur, Odisha University of Agriculture and Textile Exchange. Mention must be made of Dr S.S. Patil, Senior breeder and scientist, of UAS Dharwad, who has been an enthusiastic partner of Chetna and bioRe in India, and a willing consultant to Textile Exchange. He firmly believes that India has the capacity to support other countries in this venture as well as dealing with its own situation.

Individual efforts such as those mentioned above are highly commendable, but the need of the times is to evolve a multi stakeholder, sustained plan of action. FiBl and bioRe India are also at the forefront of driving multi-stakeholder dialog and collaboration. Textile Exchange has been highlighting the need for action over the last few years and attempting to act as a catalyst, building bridges between the government, public sector institutes, research bodies, seed companies, brands and retailers, and producer groups.
The Agricultural Produce Export Development Authority of India (APEDA) is a nodal body of the Ministry of Commerce that has been established by the Government of India by an Act of Parliament in 1985. Many functions have been assigned to APEDA, most importantly marketing and export of agricultural products.

In India third party certification is carried out by 24 Certification Bodies (CBs) that have been accredited by APEDA. Fourteen of these Certification Bodies certify cotton. Of the fourteen, NOCA, CUC and ECOCERT handle the bulk of the organic cotton certification.

Another important role of APEDA is that of its role as the Accrediting Body and regulator of all third party certification in India. APEDA drew up the National Programme for Organic Production (NPOP) which was approved in 2001 by the Ministry of Commerce and all agricultural organic production in India is certified to NPOP standards. APEDA worked at achieving reciprocity for NPOP with the National Organic Program in Europe and the USDA. In 2012 NPOP celebrated its 10 year anniversary. A stylish fashion show of organic clothing marked the event.

With overseeing twenty four Certification Bodies, APEDA has a huge part to play in ensuring that India’s organic production at farm level is done as per the norms laid down by NPOP and that the certifying bodies accredited by them carry out certification in accordance with the required standards, while maintaining integrity. APEDA has strengthened the system by the introduction of Tracenet in 2011-12.

Tracenet is an online tracking system introduced for logging and tracing all organic farm production with names of farmers, GPS locations, farm size and farm survey numbers among other details. Training for implementation began in 2010 and the system was made mandatory in mid 2011. Its introduction is believed to have reduced fraud and made certification a tougher process. Though some issues are still being ironed out, the Ministry of Commerce in India and APEDA are rightfully proud of Tracenet as it is believed to be the first of its kind introduced by a government. Most stakeholders also agree that with its introduction, many “non-serious” producers have moved away from organic cotton. Stakeholders also claim that there is scope for further tightening of the system and making Tracenet even more efficient and effective.

India was one of the first countries in the world to introduce group certification. Land holdings in India are mostly small, averaging two to three ha and farms need to be aggregated into a group in order to achieve the degree of volume required for third party certification. Many of the bigger producer groups worked with large number of farmers, some of them located in different cotton producing states. This made certification complicated and control difficult, apart from fostering poor Internal Control Systems (ICS). In order to address this issue, APEDA restricted group size to five hundred farmers per group in the year 2011 which has considerably improved the ICS.
APEDA meets with the Certification Bodies on an ongoing basis and attempts a consultative approach before implementation of any new systems. However, mere systems alone do not make for integrity.

At Textile Exchange we believe that integrity is everyone’s business and cannot be assigned to just one player in the chain. Every single link is entrusted with the responsibility of maintaining integrity including ginners, mills, brands and retailers, traders, certification bodies, and the accreditation body. The most vulnerable link in this chain is the farmer who more often than not is saddled with the blame.

In 2011-12 APEDA worked towards finalizing the Indian Standards For Organic Textiles (ISOT). The standards are a part of NPOP.

The preface to the standards state that national standards exist for organic food around the world, but organic textile production is certified in adherence to independent private standards. The growing demand for organic textiles and the need to support the organic claims of the textile industry are the major reasons for the Ministry of Commerce to bring out ISOT at a national level under their legal regime and as a part of the Foreign Trade Policy.

Under ISOT the cultivation as well as the processing is covered from the growing of the cotton in the field to the manufacturing, packing and labelling. APEDA works to ensure better integrity for Indian organic textiles and aims to strengthen the image of India organic textiles. The ISOT covers Indian wild silk such as Tasar and hemp grown by Tribals in forest areas, and also handloom weavers in Jharkhand, Odisha and Madhya Pradesh, among others. It is expected to be implemented mandatorily by 2013-14. Exporters of organic textiles will have to certify to ISOT by law and to the existing GOTS and OE standards by choice.

Indian organic cotton continues to depend heavily on the overseas markets. The existing value chains typically extend from farmers engaged through a contracting system, through to gins, mills and finally to brands and retailers. Traders are also involved. However, given the current international market demand constraints, Indian producers and mills engaged with organic cotton would benefit hugely from expanding their markets within India. This would help them reduce their dependence on international markets, minimise their vulnerability, create more self-reliance and also help enhance their image within national boundaries.

The domestic market holds great promise and remains relatively untapped. According to recent estimates, the Indian market for apparel is currently valued at USD 40 billion and is estimated to go up to USD 124 billion in 2020. India would thus emerge as a country with one of the fastest growing markets for apparel, up from four percent of global share to seven percent. Currently the market consists of both branded and unbranded apparel but all indications are that the preference for branded apparel will grow considerably in the future. Even a casual visitor to India can see clear evidence of this. There is growing consumerism and urbanization, a larger segment of people with bigger incomes, young people with higher discretionary incomes, preference for easy and wider access to a greater variety of clothing, more organised retail through shopping malls, and both Indian and International brands.
The year 2012-13 is expected to be yet another challenging one for producer groups. If the market makes it rewarding, then organic cotton will be grown responsibly with strong internal control systems. The economic benefits will filter down to the farmers, thereby helping create rural economies that are healthy and vibrant.

Many producer groups would like to see a more integrated approach to organic cotton farming and seek support with evolving systems that could incorporate a food and fiber plan rather than a system that is focused heavily on cotton. The growing market for organic food in India and good export markets for crops such as soya potentially present sound opportunities as well as make for better food and nutritional choices for the farmers. This could also serve the purpose of distinguishing the organic cotton farmer from a conventional Bt farmer with the imminent arrival of Roundup Ready Flex (BG-II) Bt seeds which would change existing inter-cropping patterns.

Organic cotton producers are also looking for government support in non-Bt seed production and availability, dealing with the risk of contamination, identification of production areas, and for incentives for organic production practices.

“Fab India” cosily rubs shoulder with M&S, Diesel, Vera Moda and Zara and several other international brands are lining up. Online retail companies are growing at a great pace, as India has one of the largest percentages of internet users in the world.

All of this spells huge opportunities for the organic apparel market. The Indian consumer is more aware, discerning, and responsible and the cross-section of people who want to make a difference is growing. There is also a growth in domestic and international tourism and Yoga and Green holidays are the flavor of the day. Nuclear families with double incomes are the new baby boomers of India. With some effort and imagination these markets can be successfully tapped. Existing opportunities such as BioFach India can be leveraged to better access domestic markets, and new opportunities must be explored. India has several fashion weeks and a growing number of exciting designers.

India has an emerging organic and ethical fashion sector. Some like Ethicus from Tamil Nadu have created a niche by working with handloom and Indian heritage clothing such as saris and duppattas. According to a Fibre2Fashion report, Indian brands such as Fusion Clothing and Bhu Sattva are doing good business and they have seen 100 percent growth in sales over the last two years, with a projected growth of 300 - 500 percent. There are no accurate figures of the size of the existing market yet. There is a need for the bigger industry players to get active in the domestic market and serve as drivers of growth.

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United States of America

The USA faced a severe drought in 2011-12, resulting in a 35.8 percent abandon rate. As a consequence, production decreased to 3.4 million mt despite the cotton area increasing by 25.2 percent (15.6 million bales).

Organic cotton production contracted in 2011-12, due mostly to the severe drought in the Southern Plains. While the area initially planted in organic cotton rose 36 percent from 4,786 ha (11,827 acres) in 2010-11 to 6,495 ha (16,050 acres) in 2011-12, actual area harvested plunged to 2,489 ha (6,151 acres) — with nearly two thirds of the planted crop abandoned to drought. As a result, 7,259 bales were harvested in 2011-12, representing a 45 percent reduction in the overall organic cotton harvest for that year.

Farm size averaged 212 ha (525 acres), with some farming as few as 6 ha (14 acres), and others farming as many as 1,295 ha (3,200 acres). The majority of the organic cotton crop for 2011-12 was planted to upland cotton, with Pima cotton representing fewer than 405 ha (1,000 acres) planted.

The Organic Trade Association (OTA) identified 83 people and businesses (40 farmers) thought to grow organic cotton in Arizona, California, New Mexico, North Carolina and Texas.
access to seed

Commercial availability of organic seed is a major hurdle for organic cotton producers. GMOs have become dominant in the marketplace as major seed companies have purchased smaller labels and discontinued their organic, non-GMO and non-treated cotton seed offerings.

The OTA survey reported farmers using at least a portion of their own saved cotton seed from year to year, while others reported having lost their seed stocks due to drought.

pricing

A predominance of farmers reported receiving USD 1.50 per pound for organic upland cotton, with prices reaching as high as USD 3.00 for organic Pima cotton. These prices were roughly in line with USA organic cotton prices for the past several years.

While drought conditions severely decreased the USA organic cotton supply, the same was obviously not true for all international organic cotton suppliers, some of which were able to deliver organic cotton to the USA for less than the price of domestic organic cotton.

On a positive note, 2011 represented the first crop year in which the USDA’s Risk Management Agency allowed organic producers to opt for an “Organic Price Election,” when purchasing multi-peril crop insurance. This meant that, for an additional premium, organic farmers were compensated at a rate of USD 0.37 per pound higher than the rate at which conventional cotton was trading in the region.

looking ahead

The Southern Plains drought that devastated the 2011-12 organic cotton crop continued into 2012-13. Cotton farmers anticipated the continuation of drought conditions and some reported that they had not planted a crop in the 2012-13 growing season. As with 2011-12, much of the dryland crop failed to thrive owing to the lack of moisture. Compounding matters further, irrigated acres were expected to yield less cotton due to the lack of additional rainfall. Furthermore, several areas experienced early frost, potentially harming the developing cotton fibers. However, it appeared to have taken a less extreme toll on cotton in 2012-13.

Organic cotton farmers reported a ten percent decrease in area planted – from 6,495 ha (16,050 acres) in 2011-12 to 5,860 ha (14,481 acres) for 2012-13, final harvest data are not yet available. Organic farmers in the USA envision a five-year increase in area planted – to 6,572 ha (16,240 acres), slightly more than the year before. Opportunity exists for significant expansion of organic acreage in emerging organic cotton growing regions such as North Carolina.

Excerpts taken from the Organic Trade Association Report; for more information, please see the OTA’s full report.
part 4
A closer look at Fairtrade cotton
on

photos: ©Simon Rawles / Fairtrade International and ©Fairtrade / Ireland
A closer look at Fairtrade cotton  
(written by Damien Sanfilippo)

**Fairtrade** is the world’s most recognized ethical label with high consumer trust – a global multi-stakeholder organization representing over 1.2 million smallholder farmers and workers and USD 6.6 billion in retail sales.

In the past year two independent impact studies with research on Fairtrade cotton were published. Together they offer a picture of how Fairtrade has made a difference to cotton farmers in the main cotton-producing regions of West and Central Africa and India. Their conclusions offer valuable insights for any company seeking to make sustainable cotton a part of their business.

*Fairtrade Cotton: Assessing Impact in Mali, Senegal, Cameroon and India* (Natural Resources Institute (NRI) and Institute of Development Studies (IDS)) and *Assessing the Impact of Fairtrade on Poverty Reduction through Rural Development* (University of Saarland Center for Evaluation (CEval)) involve in-depth qualitative research about Fairtrade cotton’s impact.

Fairtrade is a farmer-centered approach to sustainability that “lays the essential foundation for successful and sustainable rural development” (CEval). Fairtrade’s unique approach allows farmers to take ownership of their own development path through participation in strong and democratic organizations.

The Fairtrade Standards have core environmental requirements that are strict on protecting farmers’ health and safety, conserving nature and banning the use of GMOs and the most harmful chemicals. Fairtrade then encourages continuous improvement on good agricultural practices.

By selling to the Fairtrade market, cotton farmers have the security of a Minimum Price based on their average costs of sustainable production, plus a Fairtrade Premium to invest collectively in farm and community projects. The Fairtrade organization also provides on-the-ground support to producer groups to meet the Fairtrade Standards.

“Fairtrade provokes positive change through various measures. One measure is the Fairtrade standards. The adherence to these standards improves working conditions, gives security to farmers and workers, and protects the environment. Another important Fairtrade measure... is the Fairtrade Premium. The Fairtrade Premium offers farmers and workers the important opportunity of participation in community development. Farmers and workers assume new responsibilities, acquire new skills and get involved in areas other than farming. The investments made with Fairtrade Premium money often improve living conditions in rural communities.” (CEval)
“[Fairtrade] producer standards had led to significant environmental benefits (sometimes in combination with organic certification) in the reduction of the use of harmful pesticides, better disposal of chemical containers, introduction and strengthening of sustainable agriculture farming methods.” (NRI & IDS)

The environmental benefits of Fairtrade go beyond the core requirements in the Fairtrade Standards. The researchers found that Fairtrade provided a framework to incentivize farmers to produce higher quality cotton and more investment in sustainable agricultural practices.

‘Fairtrade Cotton’ also highlights strong synergies between Fairtrade and organic production. The Fairtrade Premium, higher Fairtrade Minimum Prices for organic cotton and the support of the producer organization can help farmers convert their crop to organic and maintain a viable organic production system. Both certification systems contribute to sustainable practices through a combination of requirements, training and financial incentives.

Fairtrade has helped cotton farmers to formally organize, in some cases for the first time. Farmer organizations have benefited from improved management practices and institutional capacity-building and training. Farmers actively participate in the decision-making and designing of development projects, an opportunity the Ceval report concludes is unique to Fairtrade. The research found that Fairtrade certified farmers felt a greater sense of independence, participation and empowerment.

Fairtrade has had a positive impact on the lives of women in West and Central Africa where more women not only cultivate their own cotton but have become key decision-makers in their producer organization. In India this is less evident: women have a formal role in meetings but do not play an active role in decision-making.

Fair pay for farmers and workers is one of consumers’ top concerns: 85 percent of consumers say this issue is important for companies and their suppliers in their dealings with poor countries. (GlobeScan, 2011)

One of the most important impacts of Fairtrade is the additional income benefit of Fairtrade prices. In West and Central Africa the Fairtrade Minimum Price for cotton during the research period was found to be significantly higher than the state price – up to 49 percent higher in Senegal and Cameroon and up to 78 percent higher in Mali. Although the Fairtrade Minimum Price has had less impact in India since market prices have generally been higher, ‘Fairtrade Cotton’ nevertheless found that the Fairtrade promoting body had consistently paid above market prices.

Small-scale farmers were thus found to benefit from higher and more stable incomes than producers in conventional production. The additional income was found to be highly valued by households allowing them to improve food security and basic needs such as health care and children’s education. Some farmers reported being able to use additional income from cotton for investments in income-generating activities like land, farming equipment and even savings, although this is currently limited to those farmers who benefit from sufficient Fairtrade sales, acreage and yields.
The researchers confirmed that the Fairtrade Premium is used by farmers to invest in improving their production practices as well as community benefits: “according to producers the [Fairtrade Premium] has brought positive benefits in all four case study countries from investment in education, health, water, agricultural infrastructure and support for organic production.” This combined with Fairtrade requirements, financial incentives, and training from support organizations, “achieved quality improvements in all four country case studies”. (NRI & IDS)

While the Fairtrade Premium is often associated with social projects that benefit the whole community, for example improvement of education and health services, Fairtrade International’s own monitoring and evaluation data show that cotton producer organizations invest a significant amount of their Fairtrade Premium towards farm improvement activities. This includes investments in soil management, field leveling and stone contour lines for erosion control and water drainage, water harvesting via farm ponds and drip irrigation systems, storage facilities for seeds or chemicals, cotton canvas harvest bags to minimize contamination, organic fertilization capacities such as compost pits, etc.

Both reports conclude that income and many non-income benefits to farmers are heavily dependent on sustained demand for Fairtrade cotton and cotton products. The ICAC cotton review journal in 2012 found that “a major drawback [of Fairtrade] is that while farmers are required to learn new crop management techniques and, in most cases, to face additional production costs, demand for their cotton is not guaranteed.”

A drop in sales of Fairtrade cotton since 2009 has had a severe adverse effect on producers’ income, particularly in West Africa. The impact of price benefits from Fairtrade has also been lessened by steady increases in the price of agricultural inputs. Of particular concern to the industry, ‘Fairtrade Cotton’ found that as a result of poor Fairtrade sales, farmers were becoming less incentivized to grow cotton with some farmers reporting that they were now focusing on other crops and alternative ways of earning an income than cotton.
Fairtrade can bring deep and meaningful impact to cotton-farming communities. While the recent impact reports by NRI and IDS, and CEval also highlight a number of weaknesses in the Fairtrade model, the conclusion is that Fairtrade is overall good for farmers. The reasons why offer important lessons for the cotton industry as a whole.

With the appropriate support, such as that offered by Fairtrade, farmers can and will invest in a more sustainable future – ecological, economic and social. This is more important than ever as farmer’s resilience is threatened by worsening climate change variability severely disrupting rain patterns. Fairtrade International and its members are now committed to scaling up activities to support vulnerable cotton farmers to improve their position and address the challenges they face.

Fairtrade will be introducing a new way for industry to engage in sourcing Fairtrade cotton, to be announced in the coming year. This new mechanism is expected to allow new brands to include Fairtrade cotton in their sustainability sourcing strategies, and open the opportunity for farmers to sell substantially more cotton on Fairtrade terms.

Fairtrade International is developing a programatic approach to producer support designed to create even more incentives for producer organizations to invest in sustainable and efficient farming practices and achieve measurable improvements in quality, productivity, climate change resilience and sustainable use of natural resources. The program will leverage farmers’ investments by channelling more Fairtrade and industry resources towards targeted farm improvement activities. The biggest strength of this approach lies in the fact that decisions are taken by farmers themselves so that the farm improvement activities fit their needs and are embraced by the farming communities.

For more information please refer to Fairtrade’s impact studies.

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### Table 19

<table>
<thead>
<tr>
<th>Region</th>
<th>Country</th>
<th>Number of producer groups</th>
<th>Number of farmers</th>
<th>Number of women farmers</th>
<th>Fiber production (mt)</th>
<th>Seed cotton production (mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>West &amp; Central Africa</td>
<td>Burkina Faso, Cameroon, Mali, Senegal</td>
<td>13</td>
<td>30,200</td>
<td>7,100</td>
<td>3,800</td>
<td>9,900</td>
</tr>
<tr>
<td>South Asia</td>
<td>India</td>
<td>18</td>
<td>35,200</td>
<td>2,000</td>
<td>14,000</td>
<td>36,700</td>
</tr>
<tr>
<td>Other</td>
<td>Brazil, Egypt, Nicaragua, Kyrgyzstan</td>
<td>4</td>
<td>1,300</td>
<td>50</td>
<td>530</td>
<td>1,400</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>35</strong></td>
<td><strong>66,700</strong></td>
<td><strong>9,150</strong></td>
<td><strong>18,330</strong></td>
<td><strong>48,000</strong></td>
</tr>
</tbody>
</table>

**Footnote:**
- The seed cotton production figure is made up of 14,900 mt of conventional cotton and 33,100 mt of organic and transition cotton.
part 5
cotton sustainability initiatives
Bayer e³™ – environmentally responsible, economically viable and socially equitable – is one of the newest initiatives in the cotton sustainably landscape. Growing upland cotton of the highest quality, the producing farmers in the USA are contracted by Bayer e³™ and certified FiberMax® or Authentic Stoneville®.

The project aims to meet the global textile industry’s demand for consistent quality, proven and high quality fiber and to build consumer confidence by connecting retailers directly with growers in the USA whilst also offering the possibility to trace the product back to the field where the cotton was grown.

The e³™ stands for:

- **Equitable** socially to address issues of working/living conditions of growers and laborers, needs of the surrounding community, consumer health and safety aspects

- **Economically viable** methods:
  - To meet the individual economic needs of the farmers, farm families, farm workers and customers
  - To make the farms financially competitive enterprises and consistently profitable from year-to-year

- **Environmentally responsible** production reducing the use of water, land and energy while maintaining productivity
  - To help conserve resources through the Fieldprint® Calculator self-assessment which shows the farmer the impact of farming practices on natural resources, helps them to operate efficiently and brings a point of comparison with local data averages. Thus, farmers can identify areas where improvements can be made, regarding the sustainability factors (productivity, land use, soil loss, irrigation water use, energy use and greenhouse gas emission).

Enrollment by the farmer is voluntary but once enrolled farmers make a commitment to the program and to continuous improvement. The farm performance is self-evaluated through the Fieldprint® Calculator and third party verified with audits in season and post-harvest. At harvest, bales are entered into the database and the certified product is sent to the brand.
Beginning in Texas and Missouri states with 15 farmers, 24,000 ha under production and 27,000 mt of fiber produced, the initiative is spreading to other states such as Arizona and Louisiana and planned to nearly double its numbers (farmers, area and fiber production) in the coming season.

To find out more about the project, visit Bayer Branded Cotton.

<table>
<thead>
<tr>
<th>states</th>
<th>number of farmers</th>
<th>number of women farmers</th>
<th>area under production (ha)</th>
<th>seed cotton production (mt)</th>
<th>fiber production (mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Missouri, Texas</td>
<td>15</td>
<td>1</td>
<td>24,000</td>
<td>82,250</td>
<td>27,143</td>
</tr>
</tbody>
</table>

To learn more about the project, visit Bayer Branded Cotton.
The Better Cotton Initiative (BCI) brings together producers, ginners, mills, traders, manufacturers, retailers, brands and civil society organizations in a unique global community committed to developing Better Cotton as a more sustainable mainstream commodity. BCI aims to create long-term change by helping farmers to grow cotton in a way that reduces stress on the local environment and improves the livelihoods and welfare of farming communities.

The Better Cotton standard focuses on the social, economic and environmental aspects of cotton production. Growing Better Cotton means initially meeting a set of minimum requirements including pesticide use, water conservation, habitat protection, fiber quality, and decent work principles. Once the minimum criteria are met, farmers need to show continuous improvement to remain qualified.

### Table 21

<table>
<thead>
<tr>
<th>Country</th>
<th>State</th>
<th>PU</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>Andhra Pradesh, Gujarat, Madhya Pradesh, Tamil Nadu, Maharashtra, Odisha, Karnataka, Punjab, Rajasthan</td>
<td>43</td>
</tr>
<tr>
<td>Pakistan</td>
<td>Punjab, Sindh</td>
<td>29</td>
</tr>
<tr>
<td>Brazil</td>
<td>Mato Grosso, Mato Grosso do Sul, Minas Gerais, Bahia, Goias</td>
<td>6</td>
</tr>
<tr>
<td>Mali</td>
<td>Sikasso, Segou</td>
<td>1</td>
</tr>
<tr>
<td>China</td>
<td>Xinjiang, Hebei</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>79 PU</strong></td>
</tr>
</tbody>
</table>

1. PU = Production Units, LG = Learning Groups and LFE = Large Farm Enterprises
2. Compliance rate = number of licensed Better Cotton farmers divided by the total number of farmers participating in BCI projects
3. These figures refer only to Better Cotton (vs. total project figures of both farmers who received a license to produce BCI cotton and farmers who did not)
4. Start in 2012-13

All numbers have been rounded.
Better Cotton is produced by farmers who:

- minimize the harmful impact of crop protection practices
- use water efficiency and care for the availability of water
- care for the health of the soil
- conserve natural habitats
- care for and preserving the quality of the fiber
- promote decent work

In 2012, BCI licensed 165,000 Better Cotton farmers who produced 670,000 mt of Better Cotton lint. Initial 2013 forecasts are already showing further significant growth.

- 2010 harvest: 35,000 mt of Better Cotton
- 2011 harvest: 200,000 mt of Better Cotton
- 2012 harvest: 670,000 mt of Better Cotton

(Please note that the 2012 harvest figures refer to the amount licensed. BCI is currently collecting all the final information from the producers and will know the exact volume produced in August).

In June 2012, BCI revealed its 2013-15 Strategy to its membership at its General Assembly in Istanbul. Under the theme of “Better, bigger and bolder”, this three-year strategy will be all about achieving scalability.

Ambitious but realistic targets have been set: One million Better Cotton farmers producing enough Better Cotton for spinner to procure 1 million mt of it by 2015. The fundamentals remain the same, namely commitment to a three-pronged focus: social, economic and environmental sustainability.

BCI’s vision for 2020 is that Better Cotton will make up 30 percent of global cotton production, it will be working with five million farmers across the world and bring benefits to 20 million people in primary production. BCI’s baseline for becoming a Better Cotton farmer is challenging but achievable, with a requirement to be better every year. In this way, BCI hopes to move the sector ever closer to full sustainability.

For more information please read the **BCI Annual Report**.

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Number of Farmers</th>
<th>Area Under Production (ha)</th>
<th>Seed Cotton Production (mt)</th>
<th>Fiber Production (mt)</th>
<th>Foreasted Fiber Production 2012-13 (mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>53%</td>
<td>35,000</td>
<td>47,500</td>
<td>97,000</td>
<td>32,000</td>
<td>105,000</td>
</tr>
<tr>
<td>94%</td>
<td>44,000</td>
<td>145,000</td>
<td>325,000</td>
<td>115,000</td>
<td>215,000</td>
</tr>
<tr>
<td>98%</td>
<td>100</td>
<td>210,000</td>
<td>700,000</td>
<td>295,000</td>
<td>no data</td>
</tr>
<tr>
<td>91%</td>
<td>10,500</td>
<td>32,000</td>
<td>30,000</td>
<td>12,500</td>
<td>25,000</td>
</tr>
<tr>
<td>72%</td>
<td>90,000</td>
<td>435,000</td>
<td>1,150,000</td>
<td>455,000</td>
<td>over 375,000 mt licensed as of January 2013</td>
</tr>
</tbody>
</table>

1. PU = Production Units, LG = Learning Groups and LFE = Large Farm Enterprises
2. Compliance rate = number of licensed Better Cotton farmers divided by the total number of farmers participating in projects
3. These figures refer only to Better Cotton (vs. total project figures of both farmers who received a license to produce Better Cotton farmers and farmers who did not)
4. Start in 2012-13

All numbers have been rounded.
The Sustainable Cotton Project & Cleaner Cotton™
(written by Marcia Gibbs and Lynda Grose)

Founded in 1996 to help reduce the toxic impacts of cotton in rural California, The Sustainable Cotton Project (SCP) helps growers in the San Joaquin Valley to convert practices from chemical-intensive to biologically based farming systems. SCP’s Cleaner Cotton™ program operates without the use of genetically modified seed and reports consistent chemical reductions of 50-73 percent compared to conventional fields in the same region (Gibbs and Grose, 2008).

The SCP provides crop information through their field scout and links farmers to technical information provided through University of California (UC) Co-operative Extension Farm Advisors and UC Integrated Pest Management (IPM) advisors. Growers enroll in the program before planting and team with mentor farmers. Biological controls include:

- field margin or inter-planting with alfalfa or other beneficial habitats such as corn, sunflowers, sorghum, blackeye beans
- intensive scouting to monitor pests and beneficials
- early releases of beneficials
- limiting or eliminating pesticide applications in the spring and/or using soil fertility and nutrient monitoring
- partnering with UC technical experts to customize approaches for each farm.

In addition, when pest infestations do threaten the crop, growers are requested to use ‘softer reduced-risk chemicals’. To be eligible for the Cleaner Cotton™ pool, the program disallows the use of the 13 most toxic chemicals (based on toxicity and water and air quality impacts – Extoxnet and Pesticide Action Network).

The results of SCP’s program are monitored through a statewide law. California has the largest pesticide regulatory system in the United States with inspectors overseeing local enforcement, operating from agricultural commissioner offices, county by county. Farmers must obtain site-specific permits from their local commissioner to buy or use agricultural chemicals. The request for a permit is evaluated according to environmental and public safety parameters. The volume of chemicals used is documented and aggregated under California Environmental Protection Agency (CALEPA) State Department of Pesticide Regulation (DPR) supervision, and then the data are made publicly available. SCP uses this same system to track chemical use on the Cleaner Cotton™ fields and the data are then compared with county averages on conventional fields in the same region.
Bringing Cleaner Cotton™ to market has been a challenge, primarily due to the complexity, global nature and opacity of the commodity fashion supply chain. Brands most often purchase a final product and seldom know where the raw fiber in that product comes from. Requesting a change in fiber type and procurement is therefore cumbersome. SCP’s most recent marketing activity has therefore focused on supply chain solutions to enable brands and designers to access Cleaner Cotton™ fiber in various forms. In 2012, SCP purchased fiber from its own farmers and had it processed into sliver at a USA spinning mill. This enabled SCP to provide Cleaner Cotton™ in bale and sliver form upon request and to respond to market interest in yarn weights from 6’s to 30’s singles. As a result, Cleaner Cotton™ is now available at retail for hand knitting and hand weaving markets in 10’s two-ply to 20’s four-ply. Additional tests are currently underway in 30’s singles yarn for feather-weight knit fabrics.

In addition to the above efforts to make Cleaner Cotton™ fiber more accessible to designers and brands, SCP is also collaborating with local investors on building a cotton spinning facility in Firebaugh, California, the heart of SCP’s farming activities. The facility will provide a business-to-business market in advance for the 2014 Cleaner Cotton™ crop and will make 40’s-100’s Cleaner Cotton™ yarn counts available to the industry, enabling California grown, spun and sewn products to be offered to interested brands and designers in the very near future.

<table>
<thead>
<tr>
<th>states</th>
<th>number of producer groups</th>
<th>number of farmers</th>
<th>number of women farmers</th>
<th>area under production (ha)</th>
<th>seed cotton production (mt)</th>
<th>fiber production (mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Central Valley</td>
<td>1</td>
<td>12</td>
<td>1</td>
<td>1,486</td>
<td>2,023</td>
<td>703</td>
</tr>
<tr>
<td>California - Fresno, Madera &amp; Merced Counties</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

footnote:
* Both Pima and acala fiber is grown with average yields ranging from 2.8 to 4.6 bales per ha
Cotton made in Africa (CmiA) is an initiative of the Aid by Trade Foundation (AbTF) that helps people to help themselves through trade, improving the living conditions of smallholder cotton farmers and their families. The initiative’s approach focuses on activating market forces instead of charitable donations. An alliance of international textile companies built up by CmiA buys the sustainably grown cotton and pays a license fee to the foundation. In 2012, around 435,000 smallholder farmers from Benin, Côte d’Ivoire, Mozambique, Malawi and Zambia participated in the program. Since November 2012 the initiative also works in Zimbabwe.

Under the “helping people help themselves through trade” motto, Cotton made in Africa stands for an innovative approach to development cooperation. Qualification programs teach smallholder farmers about efficient and environmentally friendly cultivation methods. These include the proper use of pesticides (“threshold spraying”), efficient application of fertilizers, usage of compost pits and measures to maintain soil fertility such as crop rotation.

The verification system for Cotton made in Africa monitors the social, economic and environmental development of smallholder cotton farmers and the associated ginneries. The system is based on a range of exclusion criteria, and parties who do not comply are excluded from program participation. These criteria include eliminating child labor in accordance with the respective International Labor Organization (ILO) convention, the exclusion of pesticides forbidden under international agreements, exclusion of genetically modified seeds and of artificial irrigation. In addition to exclusion criteria, there are a number of sustainability criteria applied using a traffic light rating system and designed to continually improve the living and working conditions of the smallholder farmers involved and their families.

These sustainability criteria ensure that CmiA cotton has a considerably smaller ecological footprint than conventionally grown cotton, and that farmers achieve increased yields thus improving their income. In 2010-11, for example, around 83,000 mt of lint cotton were produced on about 290,000 ha of land. In the most recent cotton season, CmiA expanded the area of cultivated fields by around 85 per cent to roughly 564,000 ha and showed a production rise of around 96 per cent to 163,000 mt.
On the marketing side, Cotton made in Africa relies on a global alliance of textile firms and international fashion brands specifically interested in purchasing sustainably produced cotton, which then enters the global production markets and is processed into textiles. Currently around 20 companies are part of the demand alliance, including names like Puma, C&A, Tom Tailor, s.Oliver, the Rewe Group, Tchibo, and the Otto Group. The license fees paid by the demand partners are directly reinvested to benefit smallholder farmers in the project countries. The initiative supports social programs that focus on building up school infrastructure and promote women’s cooperatives in rural cotton-growing regions, for example. Here the initiative works with retail partners, African cotton companies and public institutions. In future CmiA will also assume the financing for training programs and the costs of verification for CmiA cotton. Overall roughly three million people in Benin, Côte d’Ivoire, Mozambique, Malawi and Zambia profit from the work done by the Cotton made in Africa initiative.

As part of a sustainable development partnership, the initiative works with a variety of public and private partners and non-governmental organizations. In addition to the Welthungerhilfe, the World Wide Fund for Nature (WWF), and the Naturschutzbund Deutschland (NABU), the German Federal Ministry for Economic Cooperation (BMZ), the Deutsche Investitions- und Entwicklungsgesellschaft (DEG), the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) and the Bill & Melinda Gates Foundation participate in Cotton made in Africa. Cotton companies such as Plexus, Cargill and Great Lakes, are essential to realizing our goals in our project countries.

Thanks to the growing demand alliance, sales of Cotton made in Africa cotton have risen continuously over the past few years. In 2007 Cotton made in Africa was introduced to the German market with 400,000 units, which grew to around 20 million textiles by 2012. In 2013 the initiative projects sales of around 24 million units.

Currently Aid by Trade Foundation is working on the expansion of its standard family by adding a new social-organic standard “CmiA organic cotton standard” that will probably be completed in early autumn 2013.

<table>
<thead>
<tr>
<th>countries</th>
<th>number of farmers</th>
<th>area under production (ha)</th>
<th>seed cotton production (mt)</th>
<th>fiber production (mt)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin, Côte d’Ivoire, Malawi, Mozambique, Zambia</td>
<td>435,000</td>
<td>564,000</td>
<td>393,000</td>
<td>163,000</td>
</tr>
</tbody>
</table>

footnote:
- Zimbabwe will be integrated into calculations starting with the 2012-13 campaign.
part 6
organizations advancing cotton
organizations advancing cotton sustainability

photos: (top-left) © Frédéric Raevens / Max Havelaar Belgium; (bottom-left) Mecilla, China; (top-right) Chetna, India; (bottom-right) Solidaridad, Tanzania
CottonConnect (written by Rosanne Gray)

CottonConnect was created in 2009 through collaboration between Textile Exchange, C&A and Shell Foundation. Together, these organizations saw the need to create a company with a social purpose that works directly with retailers and brands, delivering business benefits by creating more sustainable cotton supply chains.

CottonConnect works across many cotton sustainability initiatives and standards with a team of farm experts on the ground in South Asia and China. CottonConnect provides tailored support and tools - be it for organic, BCI or their REEL cotton programme - while providing solutions that enable progress towards more transparent and sustainable supply chains.

CottonConnect is a pioneering company with a social purpose, delivering business benefits to retailers and brands by creating more sustainable cotton supply chains in South Asia and China.

Their approach involves tracing cotton supply chains from garment back to farm and creating tailor-made farmer training programs that mainstream sustainability into brands’ conventional cotton supply chains.

In the 2013-14 cotton season CottonConnect is:

- Engaging the supply chains of over 25 international brands and retailers
- Implementing farmer training with over 80,000 farmers
- Impacting over 400,000 livelihoods
- Increasing the land under more sustainable cotton cultivation by 345,000 acres (139,617 ha)
- Addressing issues such as water, pesticides, and decent work
- Scaling up activities in India, China, and Pakistan

Key focus areas

- Defining Sustainable Strategies:
  - Building the business case for sustainability and creating implementation strategies
  - Value Chain Mapping – analyzing volumes from garment to farmer; creating more transparency
  - Delivering employee and supply chain engagement workshops

- Increasing the supply of more sustainable fiber:
  - Tailoring scalable farmer training programs across all standards and initiatives
  - Focusing on water and pesticide efficiency, soil health, livelihood enhancement and decent work
  - Monitoring and evaluating impacts – enabling the telling of stories

- Connecting the supply chain:
  - Providing procurement support – connecting the fiber into supply chains
  - Convening with stakeholders across the supply chain
  - Creating more transparency and engagement
CottonConnect works with its customers to develop long-term, committed relationships with organic farm groups both in South Asia and China. Areas of focus include:

- In-field training and support
- Increasing yield and profitability
- Building the numbers of organic farmers
- Supporting large-scale organic cotton seed program
- Enhancing internal control systems
- Coordinating GMO testing

As a member and implementation partner of BCI, CottonConnect is working to grow Better Cotton in India and China.

CottonConnect works with BCI member brands, developing opportunities to invest in creating BCI fiber at farm level in a number of ways:

- Better Cotton Fast Track Fund Programme (BCFTF) – in India since 2011
- BCFTF program plus ginner investment – created a BCFTF project in India with investment partnership from a ginner
- Creating BCI ‘Umbrella of brands’ projects – allowing BCI member brands to join a group and invest in scaling up BCI projects at farm level

The REEL (Responsible Environment Enhanced Livelihoods) Cotton program is a tailor-made, location-specific program for each Brand/Retailer. In the 2013-14 season, CottonConnect is working with over 14,000 farmers in India, China, and Pakistan, specifically focusing on:

- Increasing productivity of farmers
- Improving water efficiencies, including drip irrigation
- Reducing pesticide and synthetic fertilizer use
- Improving work practices and conditions
- Raising awareness of child labor, working towards eliminating child labor as defined in ILO convention 138 and 182
- Increasing awareness about education for all children
- Increasing awareness of health and safety at the farm level
FiBL - Research Institute of Organic Agriculture (written by Monika Messmer)

development starts with research

The Research Institute for Organic Agriculture (FiBL) is an independent, non-profit, research institute with offices in Switzerland, Austria and Germany. FiBL aims to advance cutting-edge science in the field of organic agriculture. FiBL’s research team works together with farmers to develop innovative and cost-effective solutions to boost agricultural productivity while never losing sight of environmental, health and socio-economic impacts.

FiBL has long been committed to the international development of organic agriculture. It works closely with the International Federation of Organic Agriculture Movements (IFOAM) and other international organizations. FiBL has a highly competent staff with expertise in organic soil management, plant production, holistic animal health, animal ethology and organic animal breeding. FiBL staff also has expertise in socioeconomics, in comprehensive analysis of the organic market, and in organic food processing and production. Along with practical research, FiBL places a high priority on knowledge transfer into agricultural practice through advisory work, training courses and expert reports through many means of dissemination, including magazines, technical leaflets, reference books, video and internet. Numerous FiBL projects in Eastern Europe, India, Latin America and Africa promote the development of organic research services as well as advisory and certification services.

FiBL has initiated several projects on organic cotton for sustainable agriculture systems with local partners:

- **SYS.COM**: Long term system comparison trial to compare organic, biodynamic, conventional and Bt cotton cultivation practice in central India in cooperation with bioRe Association funded by the Coop Sustainability Fund, Biovision Foundation, Liechtenstein Development Service (LED), and the Swiss Agency for Development and Cooperation (SDC).

- **SYPROBIO**: Organic cotton research project in Benin, Burkina Faso and Mali fostering the development of climate change adaptation by diversified organic cotton systems leading to increased food security in West Africa in close cooperation with HELVETAS Swiss Intercooperation and local organizations. The project will foster system building and more resilient food, agriculture and rural development processes in the three countries. SYPROBIO is funded by EuropAid.

- **CCE**: Participatory Cotton Cultivar Evaluation (CCE), carried out on research plots and on farms, aimed at establishing seed supply chains in central India, for locally adapted GMO-free cotton seeds. Working in close cooperation with bioRe Association and funded by Corymbo Foundation, bioRe Foundation, Coop Sustainability Fund.

- **Green Cotton Project**: Decentralized participatory cotton breeding for the needs of organic and low-input farming in cooperation with the Indian organic cotton and organizations bioRe India, Chetna Organic and the Agricultural University Dharwad to enhance the seed sovereignty of organic cotton farmers in India funded by Mercator Foundation Switzerland.

- The integration of organic cotton in locally adapted and resilient production systems at farm or field level, as well as its use for system building in economy, society, science, education and environment is targeted. Comparative research between organic, conventional and GMO is done in order to provide decision-makers with more evidence-based information. This research-for-development approach is designed and implemented with all actors and based on principles of partnership.
HELVETAS Swiss Intercooperation
(written by Frank Eyhorn)

building local capacity

HELVETAS Swiss Intercooperation supports smallholders in disadvantaged regions to engage in sustainable value chains. Farmers and their organizations receive technical assistance to improve their production system and their market linkages. In addition, they receive support to diversify their production base (rotation crops and associated crops like pulses, sesame, shea, vegetables, fruits) as well as markets (local, domestic and export markets). As confirmed by impact studies conducted by an independent university institute, this helps them to strengthen their livelihoods – more food security, increased income and reduced vulnerability. At the same time it enables them to use their natural resources in a more sustainable way, and to better cope with climate change.

Based on this strategy, HELVETAS Swiss Intercooperation has been supporting organic and fairtrade cotton projects since 2002, with funding from donors such as the Swiss State Secretariat of Economic Affairs (SECO), the Dutch Interchurch Organization for Development Cooperation (ICCO) and the French Development Agency (AFD).

The organic cotton portfolio includes projects in Africa (Mali, Burkina Faso, Benin, Madagascar) and Central Asia (Kyrgyzstan and Tajikistan). Overall, these projects involve almost 20,000 cotton farmers and their families.

Main partners of the program are local producer organizations that are built up and strengthened in their organizational and management capacities. The organic cotton program is managed by local project coordinators in the six countries, and receives technical assistance by the Organic & Fairtrade Competence Center based at head office in Zurich, Switzerland.

In collaboration with Textile Exchange, HELVETAS Swiss Intercooperation facilitates the exchange of knowledge through the Global Organic Cotton Community Platform. In order to support more sustainable cotton production and trade at an international level, HELVETAS organizes conferences and participates in platforms such as the International Cotton Advisory Council.
Louis Bolk Institute (LBI) began working in organic cotton in 1989 in Turkey. LBI was active in assisting farmers in the conversion of dried fruits and nuts to organic for various European importers such as Rapunzel and the Good Food Foundation who also had an interest in arable crops like chickpeas, lentils and wheat for bulgur. In the Izmir area those crops were grown in a rotation with cotton. Two smaller projects were started to see whether organic could solve the pest problems that caused conventional farmers to spray such enormous amounts of pesticides. That was successful and soon the demand for organic cotton superseded the demand for wheat and legumes and LBI went eastwards in Turkey to look for cotton dominated farming systems. These were found in Kahramanmaras where large scale, furrow irrigated organic cotton was grown that allowed the formation of the Bo Weevil company. A milestone was the Katharine Hamnett t-shirt “Green Cotton NOW” made from the in-conversion cotton in 1990.

In 1995 a start was made with growing organic cotton in North Uganda, Africa, with Lango Union that later became Lango Organic Farmers Promotion. In 1997 work started with OBEPAB in Benin, to develop production in the south and later in the north. In 1998-02 a second project was started in Uganda that focused on sesame as well, with Outspan. In 2006-07 LBI supported an organic cotton project in Tanzania, with BioSustain. Those projects included support on the ground with farmer organizations, training of trainers, developing internal systems for group certification, and assistance in marketing.

Another activity was a study undertaken for UNCTAD in 1996-97, to look into the differences in cost prices for conventional versus organic cotton. This brought LBI to Egypt where SEKEM was having a great impact with its more natural pest and disease management systems. The rusting spraying airplanes were still visible on the ground in the oasis. As it happened, other farmers benefitted from this ‘alternative’ approach. Included in the study were also India and Peru who were at that time the main sources of organic cotton fiber.

LBI collaborated with the Pesticides Trust, now PAN-UK on writing the book ‘Organic Cotton; from field to final product’ published in 1998. It was the first book of its kind, giving confidence to a then sceptical public that it was possible to produce good cotton without pesticides and nice textiles without harmful chemicals.

In 2009 LBI started to test organic fertilizers in cotton in Uganda. While observing the plants’ reaction to the different fertilizers, they noted quite a bit of variation in the plants in the field. There were large and small plants, lots of (or less) branches, with few (or many) bolls, with little correlation. That triggered LBI to ask farmers to select the best producing plants and to sow those seeds again the next year. That brought them into participatory breeding. In 2010, LBI started a low budget project, using university students to work with farmers and breeders on observing the traits of different mother lines in the research station but also in an on-farm situation. While the breeders were looking at producing seed for growing medium-high input cotton, the farmers provided information on low-input cotton growing which is the situation in most of the country. Uganda is a landlocked country and fertilizers are not always available for cotton growers. Also it is a country subject to climate change (floodings and droughts) which prevents farmers from investing in inputs when they are not sure of a harvest. The interaction between farmers and breeders in the farmer’s field may actually result in a cotton variety that is better suited for a low-input and climate change prone, rainfed cotton farming system; which is a situation most organic cotton growers find themselves in. LBI wants to expand this work to other countries in Africa and cooperate with others in the same field to make sure that organic and other low-input cotton farmers have access to good seed material in the future.
OrganiMark
(written by Heinrich Schultz)

driver of cotton and leather sustainability in southern africa

OrganiMark is a privately owned supply chain engineering and category management company based in South Africa. OrganiMark develops and maintains fair trade opportunities to meet the increasing demands of ethically conscious consumers for organic products.

- **Environmental Responsibility** – Strives to sustain the health of soils, ecosystems and people through climate smart production and distribution.
- **Social Responsibility** – Committed to social upliftment through job creation, education and training, poverty alleviation and community development.
- **Economic Responsibility** – Dedicated to the sound economic principles of commercially viable and sustainable business through fair and ethical trade practices.
- **Brand Integrity** – Committed to protecting the integrity of business through a unique supply chain management and traceability system, designed to accommodate any set of standards to govern a specific offering.

OrganiMark recognises the importance of supply chain integration and is using a regionalised cluster approach to building entire value chains from farm to retail. The University of Delaware in the USA will support progress through research and benchmarking.

Organic cotton and the Better Cotton Initiative (BCI) objectives to be achieved by 2018:
- Organic fiber production, Mozambique (2,000 mt of lint per year)
- BCI fiber production, South Africa (30,000 mt of lint per year)
- Local Cotton Seed Programme – Cultivar selection and seed multiplication (adapted to local conditions)
- Training and Extension Program – Organic and BCI
- Supply Chain Traceability System
- The installation of world class HVI fiber testing technology that conforms to international standards for instrument testing to determine the accurate market value of cotton fiber and to prevent the exploitation of small scale farmers.

A Sustainable Leather Integrated Supply Chain Program to be located in South Africa. Leather tanning sustainability criteria to include full organic certification; GOTS Social Justice Standards; ISO 14001 management system; water, energy, and waste considerations and reduced product miles.

OrganiMark is currently refining the criteria and are ambitiously determined to deliver a profitable tannery that generates its own energy, recycles 99.99 percent of its own water, has virtually no waste, and returns a realistic profit to its investors and shareholders. At the same time providing employment for around 200 people at or above average wages.
Solidaridad
(written by Therese Albers)
offering different paths to sustainability

Solidaridad is an international organization dedicated to responsible food production to feed the growing world population and to provide the world with an alternative to fossil fuels like oil and gas. Solidaridad focuses on the production chains that matter worldwide and where changes have great impact.

The majority of the world’s cotton farmers are smallholders; between them, they supply less than 50 percent of the world’s cotton. Low, unstable incomes prevent them from paying off the debts they incur to make investments in seeds, fertilizers and pesticides. With support from Solidaridad and partners, they can adopt more sustainable practices that will bring real personal and environmental improvements. By providing access to an organized market, these practices also bring the cash that provides farmers and their families with a dignified living.

Solidaridad embraces different routes to sustainability and is a pioneer in organic and Fairtrade cotton. Solidaridad is a member of the Council of the Better Cotton Initiative (BCI) to improve environmental and social conditions in the cotton sector and is one of the first implementing partners to support farmers in cultivating Better Cotton. Solidaridad cooperates with brands like Levi Strauss & Co, H&M and Adidas to include Better Cotton in their supply chains. Solidaridad also works with the Rabobank Foundation in the ProCotton program to improve the incomes of small cotton producers in developing countries.

From cotton to finished garment, the textile supply chain is characterized by various social and environmental challenges. By training workers and helping factories implement structural improvements, Solidaridad and its partners work to improve labor conditions, reduce pollution and improve efficiency. And by encouraging fashion brands to buy more sustainably produced textiles or actively engage with their existing suppliers on making improvements, they also help improve conditions.

With the expansion of the ProCotton program into Uganda and the BCI program in Mozambique in 2013, Solidaridad is now active in ten different countries on cotton. The current programs focus on India, China, Mali, Senegal, Tanzania, Zambia, Peru and Brazil. For the textiles program the focus lies mainly in India, China and Bangladesh.

Solidaridad support projects on Fairtrade, organic and Better Cotton, mainly in Asia, West and East Africa and Latin America. IDH (the Dutch Sustainable Trade Initiative) and the Rabobank Foundation are key partners in the BCI Better Cotton Fast Track Programme, a special fund that matches private-partner investments up to 100 percent. The BCI farm projects are also supported by the Farmer Support Programme, a four-year public-private partnership that will run until 2015. Solidaridad’s ProCotton activities in East Africa are supported by the Common Fund for Commodities.

Solidaridad partners with brands and retailers, local stakeholders and governments as well as other organizations and initiatives, such as the BCI, Fairtrade, Sustainable Apparel Coalition (SAC), and the Business Social Compliance Initiative (BSCI).
Textile Exchange - Organic in Action
showcasing local champions

Click on the icons below to read the stories of inspiration, collected from our members and friends. Each story takes you on a journey of discovery; and each story offers a unique contribution towards a more sustainable world.
photos: (top-left) bioRe, India; (bottom-left) PantsToPoverty; (top-right) CottonConnect; (bottom-right) Naturtex, Peru
appendix a
breakdown of major conventional cotton producing countries

major producers  The information in this section has been extracted from the Summary Cotton Supply and Distribution by Country report, prepared by the USDA.

China  Production in China, the lead producer country, reached 7.2 million mt (33.1 million bales), an increase of 8 percent. At the same time, government policy of supporting the prices received by its farmers goes on and the national reserve gets bigger and bigger. The ending stocks of 2011-12 accounted for 43 percent of the world share.

GMO status: 70 percent of area. (CIRAD)

India  In India – the second largest cotton producer – production increased to reach an estimated 6.0 million mt (27.5 million bales), up 5.5 percent. Production growth resulted from a 9 percent growth of the area under cotton. Despite the production rise, the yield performance continues to decline (since 2007-08) and brings a shadow to the Indian picture.

GMO status: 90 percent of area. (Ministry of Agriculture of India)

USA  The USA faced a severe drought in 2011-12. Consequently, with 35.8 percent abandon rate and despite raising its cotton area by 25.2 percent, production decreased by 15 percent to 3.4 million mt (15.6 million bales).

GMO status: 94 percent of area. (USDA)

Pakistan  Pakistan became the 4th largest cotton producer due to a higher total yield and a bigger cultivation area. It was estimated to have grown 2.3 mt of cotton (10.6 million bales) up 18 percent from the previous year.

GMO status: 81 percent of area. (ISAAA)

Brazil  Brazil was the world’s 5th largest producer in 2011-12. Brazil’s cotton production was estimated at 1.9 mt (8.7 million bales) up 2 percent with similar production area and a slightly lower yield compared to the previous year.

GMO status: 40.3 percent of area. (Céléres)

Central Asia  Central Asia’s 2011-12 production (inc. Uzbekistan, Turkmenistan, Syria) was estimated at 1.4 mt (6.5 million bales). Despite unrest, production in Uzbekistan and Syria went up (2 and 4 percent growth respectively), but in Turkmenistan production went down by 39 percent with a smaller cotton area and yield. The result is that in Central Asia production went down 6 percent from the previous year.

GMO status: Central Asia is currently GMO-free.

Australia  In 2011-12, Australia produced an estimated 1.2 million mt (5.5 million bales of cotton), up 25 percent from the previous year due to favorable crop conditions and a bigger cotton area.

GMO status: 99.5 percent of area. (ISAAA)
appendix b
research and reporting methodology & assumptions

Farm and fiber data in this report has been collected by the Textile Exchange Farm Engagement team directly from producer groups, NGO colleagues, government officials, certification bodies, and other industry stakeholders.

As well as the data published in this report, the Textile Exchange Farm Engagement team collects additional qualitative and quantitative information to improve understanding of the global organic cotton sector. This data is reported in the Farm Hub.

Adjustments to collected Data

Where data is expressed in local units it has been converted into metric units: hectares, metric tons and kilograms per hectare. Estimates have been made for data which are partly available. Where data is only provided for seed cotton, the lint production is estimated by using the ginning outturn known for the country. In some cases, only seed cotton production volume was available, therefore, the cropped areas have to be estimated using the historical yield known for the specific project.

Africa

Collected and collated by Silvère Tovignan, Textile Exchange Regional Director for Africa. Data used for this report is from several different sources. Organic cotton production data is directly collected from farm groups. Where possible, the same data was cross checked with certification bodies. For conventional cotton production, the data (mainly for West Africa) was first collected from contacts inside the national cotton agency of each country. As this data can sometimes be influenced by politics, it has been cross checked by consulting reports published by the West African Economic and Monetary Union (WAEMU).

For countries with more than one farm group, the data of all farm groups was aggregated to produce an average. If only seed cotton production volumes were available, then the ginning outturn rate (of the ginneries present in the country) was used to make the conversion from seed cotton to cotton fiber.

China

Data for China was provided by You Le and Yan Jia, ECOCERT China.

EMENA & CA

Data for EMENA & CA was collected and collated by Hanna Denes, Program Manager, and Liesl Truscott, Farm Engagement Director for Textile Exchange. Data was provided by producer groups, textile companies, and other industry representatives. Data for Turkey was collected and collated by Atila Ertem, OTS, Turkey. Data for Kyrgyzstan and Tajikistan provided by HELVETAS Swiss Intercooperation.

Latin America

Data for Latin America was collected and collated by Alfonso Lizarraga, Textile Exchange Regional Director for Latin America. The information used in the report was generated directly from interviews and consultation with organic cotton companies and farming project managers, and other private or governmental organizations, including certifiers. Relevant reports of international or regional organizations and ministries of agriculture of the mentioned countries were reviewed.
South Asia (India)

Data for India was collected and collated by Prabha Nagarajan, Textile Exchange Regional Director for India. All figures except Maharashtra and Madhya Pradesh are courtesy of APEDA. Maharashtra and Madhya Pradesh have been estimated and calculated on the basis of discussions and enquiries with stakeholders and extrapolation of the farm and fiber report data for production of 2010-11. Acreage and yield figures were calculated manually until the year 2011-12, when Tracenet, the online traceability system came into place. Therefore, for 2011-12, we adopted a mixed strategy of computing figures partly from APEDA and partly from our own enquiries and deductions.

Yields – The average yield for organic cotton is calculated at 500 kg, or 5 quintals of seed cotton per acre, and converted to lint at a recovery of 33 percent.

USA

Data for USA was collected and collated by Hanna Denes, Textile Exchange, with support from Kelly Pepper of the Texas Organic Cotton Marketing Cooperative. Data also provided by the Organic Trade Association.

Due to the lack of any centralised organic cotton data collection systems, Textile Exchange employs a range of strategies to build the global organic cotton profile and production annual snapshot. We depend upon the information provided to us by certifiers, government departments, NGOs, and industry representatives. Every effort is made to present an accurate picture of the sector.

While all efforts to ensure data is as close to actual numbers as possible, it should be understood that some data is approximated. We make every effort to third party verify our data with certification agencies. Data has been rounded to the nearest whole number.

Bayer e3™, BCI, Cleaner Cotton™, CmiA, and Fairtrade data is provided by the respective initiatives, and each organization was responsible for data accuracy.

Global conventional cotton data has been sourced from ICAC, Cotton Incorporated, and the USDA.

We have used the internationally agreed upon units of measurement and calculations:

- Production is in Metric Tonnes (mt) – 1 mt is equivalent to 1,000 kg
- American bale – 1 Bale is 480 lbs
- Land is in Hectares (ha)
- Yield is for Fiber (kg/ha)

Also see ‘definitions’ in Appendix C of this Report.

For further information on measurements and conversions, please refer to the Measurement page on the Farm Hub website.

For further information on the terminologies and acronyms used in this report, please refer to the Glossary on the Farm Hub website.
appendix c
glossary & definitions

bale For the purposes of this report, the US bale (480 lbs/218 kg) has been calculated. Indian bale equals 170 kg.

crop year Begins on August 1st of a given year and ends July 31st of the following year. All production which is harvested in that time period is counted in the crop year.

fiber Cotton that has been ginned. Interchangeable with “lint”.

ginning efficiency Ginning Efficiency: A conversion factor used to convert seed cotton production to fiber/lint (average efficiency is approximately 33 percent)

GMO a genetically modified organism (GMO) is an organism whose genetic material has been altered using genetic engineering technique. Three types of GMO cotton exists: Bt cotton, Roundup Ready and stacked cotton.

lakh A unit in the South Asian numbering system equal to one hundred thousand (100,000)

metric tons A unit of mass equal to 1,000 kilograms (2,205 lbs).

producer group A group of farmers or a major farm or a group controlling a fixed amount of farm production through long-term partnerships or contracts with farmers.

seed cotton Harvested cotton prior to being ginned. Sometimes called “raw cotton”.

For further definitions, terminology, and calculations please see: http://farmhub.textileexchange.org/trading-post/glossary-metrics

For information on organic agriculture and statistics see:

- Louis Bolk Institute - For international advice and research on sustainable agriculture, nutrition and health care http://www.louisbolk.org/
- Global Organic Cotton Community Platform – join the community to keep up to speed with issues and commentary http://www.organiccotton.org/

For conventional cotton data, updates and prices see:

- International Cotton Advisory Committee: http://www.icac.org/
- Cotton Incorporated: http://www.cottoninc.com/
- Cotton Outlook: http://www.cotlook.com/
CONTROL UNION HAS BEEN THE MAIN CERTIFICATION BODY OF SUSTAINABLE RAW MATERIALS SINCE EARLY 2000.

For over a decade we have witnessed and joined the industry in its growth and evolution from Organic to its current state of holistic Sustainable development.

Remaining unchanged over the years is that third party certification and validation still represents the highest level of assurance of product integrity for a buyer.

The foundation of Farm and Fiber integrity is crucial as it directly influences the integrity of the downstream supply chain and final product. Through a series of on-site inspections, product batch mass balance checks and unannounced inspections Control Union ensures traceability and credible product claims to be made for suppliers, buyers and consumers alike.

On the farm and fiber level Control Union collaborates closely with stakeholders by developing sustainability solutions and participating in initiatives such as; the Sustainable Fiber Program (SFP) the industry’s first certification program related to all natural sustainable fibers, Organic Cotton Life Cycle Assessment (LCA), the certified fiber to end-garment traceability platform Trace N Trade (TNT), and by becoming a Sustainable Apparel Coalition (SAC) member.
Introducing the Organic Content Standard (OCS)

The OCS will replace the existing OE standards over the next year, giving certification bodies and currently certified sites time to transition during their regular certification cycle. The new OCS will now accept any organically grown material as an input, no longer limited to organic cotton. The OCS is a single standard with two labeling options; products with at least 95 percent organically grown content may use the OCS 100 logo and products with at least 5 percent organically grown content may use the OCS Blended logo. The chain of custody requirements are detailed separately in the Content Claim Standard. For more information about the OCS and other TE-owned standards, visit Textile Exchange.

The importance of certification

Integrity is the linchpin for the sustainability efforts of the textile industry; it is essential in maintaining the trust of farmers, processors, sellers and consumers, and in ensuring that the targeted social and environmental benefits are actually achieved. It encompasses good intentions, strong standards, cooperation, diligence and transparency.

Certification to standards is one of the strongest ways to ensure that your product claims are accurate and able to be verified. Companies that implement the standards by creating linkages to their suppliers and supporting them through the process are the most successful.

A strong certification system is marked by an established policy, clear goals for suppliers, support and training, and rewards for success through the process.

Going beyond certification

What will your supply chain look like in ten years? How will you adapt to the ever-increasing information available to you and your customers about the content and impact of your products?

The foundation of certification affords the opportunity to engage with suppliers and work together towards a tangible goal. It also provides a tool to communicate with your customers about the work you are doing to improve the final product and the level of trustworthy information about those products. Building more dynamic partnerships provides everyone with the ability to successfully adapt to any future changes.
Textile Exchange inspires and equips people to accelerate sustainable practices in the textile value chain. We focus on minimizing the harmful impacts and maximizing the positive effects of the global textile industry. Our signature program focuses on organic cotton value chains; improving lives for farmers, stimulating markets, and supporting best practice.