“Growing food and fiber is the greatest source of livelihoods for the world’s poor, and plays a key role in rural development.

However, agriculture also has the biggest impact on the environment of any human activity. Key consequences include the pollution of water; soil and air; land and habitat conversion; soil degradation; and the huge demand for water.

When agricultural operations are sustainability managed, they can preserve and restore critical habitats, help protect watersheds, and improve soil health and water quality.”

World Wide Fund for Nature
NOTE FROM INDIA

“And they shall inherit...” the Tribals of the Indian forests, by Prabha Nagarajan, Regional Director, India, Textile Exchange.

India is hosting World Environment Day for the first time since 1972. The theme this year is ‘Forests, Nature at your service’. Forests deserve the focus, considering the alarming rate at which deforestation is taking place all over the world. Nowhere is the struggle as apparent as in India where rare wildlife is endangered and on the brink of extinction.

The Tiger (Panthera Tigris Tigris) is the national symbol of India. An alarming decrease in numbers, due to indiscriminate poaching for the skins, bones, teeth and other body parts saw a fall in numbers from over 3,600 in the 1990s to about 1,400 in 2008. This was the turning point which saw civil society; the Government, wildlife professionals and enthusiasts engage the people of India in a ‘Save the Tiger Campaign’. It appears that the campaign has had results; with 2011 there has been a reported increase in the number of tigers by about 10 percent. Yet, these figures are greeted with scepticism by some as the methods of counting the big cats are far from perfect.

Revered in India as ‘Lord Ganesha’, the remover of obstacles, the story of the Indian elephant (Elephas Maximus Indicus) is not too dissimilar. From teeming the forests in millions a couple of hundred years ago the Indian elephant is reduced to about 40,000 today.

And what of the human occupants of the Indian forests, who face struggles as severe, or worse? The forests have been home to thousands of tribes, roughly comprising about 8.2 percent of India’s population and officially designated as the Scheduled Tribes of India. Scheduled Tribe children have the lowest literacy rates and the highest dropout rates. Malaria and Encephalitis rage rampant in the forest and hospitals are inaccessible.

With changing fortunes and new forest laws many Tribals today are forced to the edges of the forest and this is one reason why many of them have taken to agriculture on clearings on lower elevations or in neighboring plains, growing spices, horticultural crops and a few cash crops. Among the latter, cotton is slowly gaining importance. The organic cotton growers have been quick to access the opportunity that this offers, as the Tribals have been practicing what is known as ‘de facto’ organic, on account of their lack of resources to buy chemicals and their remoteness that does not allow easy access to the chemical and Bt sales people. In addition, pro active states such as Orissa have ensured that Bt (transgenic) cotton is kept out of the state, to protect the lands and livelihoods of the vulnerable Tribals who grow cotton.

Some of the states where organic cotton is grown by tribals are Gujarat, Madhya Pradesh and Rajasthan, Tamil Nadu and Andhra Pradesh. Orissa is the largest, in terms of the numbers of tribal farmers engaged in growing organic cotton. Some of the larger groups in Orissa include Chetna, Ecofarms, Ambika Agro, Amit Green Acre, Natural Organic Farms, Spectrum International and Pratima Agro.

To these tribal farmers organic cotton offers a secure livelihood and a means to escape poverty.
“And you prate of the wealth of nations, as if it were bought and sold, The wealth of nations is men, not silk and cotton and gold.”

Richard Hovey, Poet, 1864-1900.

Originating in Central America; cotton found its way around the globe to become an essential fiber for almost every civilization. Over thousands of years humans have found ways to grow cotton and weave it into textiles; generally essential, often ornate. It is suggested that no nation has transitioned to the Developed World without having at least established a textile manufacturing industry. Regardless of the economic factors cloth is as necessary to survival as food. Just like food, the way we produce it and consume it will play a part in our quest to live sustainably.

If we looked back over time at the history of cotton we can trace a remarkable story of innovation, trade and prosperity but of course we also trace slavery, environmental damage and poverty.

Our first anniversary of Engage this month celebrates and reflects on the remarkable contribution organic cotton agriculture is making to the grower communities and ecology of our world. We also provide snapshots of some of the people, organisations and companies behind the progress.

Of course by highlighting a small number of businesses and organisations we will only scrape the surface. There are over 275,000 farmers growing organic cotton and there are hundreds of worthy producers, brands, retailers and manufacturers we could mention. Over the next 18 months (every quarter) we will be introducing more of these innovative and exciting organisations through Engage. This month we give you a flavour of what is to come!

We hope you enjoy Engage; coinciding with the United Nation’s World Environment Day. WED is an annual event aimed at being the biggest and most widely celebrated global day for positive environmental action. That is why Textile Exchange is using June 5th to celebrate the contribution of organic cotton to sustainable development.

The Farm Engagement Team
Textile Exchange
INTRODUCTION

Global issues, such as food security, climate change, biodiversity and socio-economic development remain as critical as ever. And although affecting us all, these issues are most obviously impacting rural communities in developing countries. It is these marginal rural communities that are proving the most difficult to reach and challenging the UN’s progress against the Millennium Development Goals set for 2015.

Concurrently, the debate has heated up about how to best advance more sustainable agriculture. Two landmark reports have been published within the last six months by the United Nations emphasizing the significant role organic and ecological agriculture plays in our understanding and practice of sustainable development (see references at the end).

Alongside food, how the world grows its fiber is fundamental to sustainable development. Textile Exchange, through its Farm Engagement program, and connection to the world’s most powerful textile brands, retailers and manufacturers is committed to improving the lives of cotton growers by supporting the adoption of, or transition to, organic agriculture. A better understanding of the ecological and socio-economic benefits of organic agriculture is needed. Our ambition is to see more cotton farmers move towards organic agriculture and for the markets to reward and incentivise organic – as the ‘gold star’ for sustainable agriculture.

Over the years various concerns about cotton growing have been brought to the world’s attention ranging from the overuse of toxic and persistent chemicals, to the poverty trap experienced by cotton farmers in developing countries, abuses of labour rights (including child labour), and overuse and diversion of vital water supplies.

It’s fair to say that campaigns over the years to raise awareness of the negative effects of cotton growing on people and planet have had some effect. Lately, the industry in response to expensive oil, depleted soils, and water scarcity is moving to looking at more sustainable ways to grow cotton and is behind some really innovative change in conventional farming.

There are lessons to be learned from organic production, particularly in an age of climate change, and not only for fully organic practitioners. There are a growing number of initiatives working alongside organic, aimed at improving the impacts of cotton growing and supporting the transition to organic, including Fairtrade, Cotton Made in Africa (CMiA), and most recently the Better Cotton Initiative (BCI). Our themes for World Environment Day include:

- Biodiversity
- Soil
- Water
- Climate Change
- Rural Development
- Country of Origin
- Trade Relations
- Market Growth
- Consumer awareness
WHAT MAKES ORGANIC COTTON DIFFERENT

A total of 33.8 million hectares of cotton were grown globally in 2010/11. There are 50 countries growing cotton today and around 100 million cotton farmers; almost 99 percent of whom farm in developing countries. Most cotton growers in developing countries are small resource-poor farmers growing 2 hectares or less of cotton (International Cotton Advisory Committee).

1.1 percent of the world’s cotton is now organically certified and much more is grown under agro-ecological conditions or using more sustainable techniques such as biodynamic, Integrated Pest Management (IPM) and Best Management Practices (BMP).

There are 23 countries engaged in organic cotton agriculture and there are approximately 275,500 farmers growing certified organic cotton. Alongside the cotton an average of 6 food crops are grown within the organic farm system. Farm system crops contribute to farming communities’ food security and secondary incomes (Textile Exchange).

There are 4 commercial species of cotton; with Upland cotton (Gossypium hirsutum) now the dominant cotton species; having spread to over 45 countries and accounting for over 90 percent of all cotton. These days, around 43 percent of cotton is produced from genetically modified (GM) seed which is patented by a small number of consolidated seed companies.

Whilst GM cotton is increasing it is not permitted to be grown in some parts of the world. The agricultural, ecological and socio-economic advantages of GM are still highly debated and there tends to be a polarised view of the benefits.

There are between 40 and 50 species of cotton (500 known varieties) around the world although commercially viable or available seed is much more limited. Many organic cotton ‘projects’ are located in marginalised or under-resourced rural areas; here it is more likely that local, indigenous or wild cotton is cultivated (such as within the Amazonian rainforest). Yields of native or wild cotton tend to be much lower however the contribution to biodiversity and keeping alive traditional farming is valuable in other ways. Organic cotton producers are not permitted to use genetically modified seed and they tend to source a more varied seed source, or self-save their seed. However, access to non-GM seed is an ever increasing issue for organic farmers.

Cotton is ranked 3rd behind corn and soybeans in the total amount of pesticides applied (United States Dept. of Agriculture) and is also the 4th most heavily synthetic fertilized crop after corn, winter wheat, and soybeans.

Organic cotton is produced without the use of toxic or persistent chemicals thus protecting the health and safety...
of grower communities and the risk to ecological health if not applied correctly. Organic agriculture tends to improve the natural fertility and resilience of the soil over time potentially resulting in higher yields. Organic soils hold between 4-6 percent more organic content than non-organic soils when organic matter is well maintained (research by Rapunzel). New studies show a potential for 20 percent better carbon emission reduction due to abstention of mineral fertilizers (Natural Resources Management and Environment Dept, FAO). Organic agriculture is proven to be more resilient under climatic stresses and when conditions are not favourable organic yields tend to be higher than non-organic.

Cotton is a thirsty crop and is often grown under irrigation. Ecological degradation in some cotton growing areas is a direct result of diverting water for cotton agriculture and the contamination to the land and water through excessive fertiliser or pesticide use. Unpredictable weather patterns (climate change) are affecting cotton growing in some countries.

Seventy to eighty percent of organic cotton is grown under rain fed conditions. Organic soils have approximately 40 percent better water retention than non-organic soils thus making the need for water less critical (research by Soils and More).

Most of us do not know where the cotton in our garments was grown and under what conditions. Conventional cotton is bought and sold on the commodity market.

For years prices have been low – that is sometimes lower than the cost of production (with the use of subsidies and competition). The current, relatively high prices on the commodity exchange at the moment reflect the low supply in relation to demand.

All products made using organic cotton can be traced back to their country of origin through the organic certification process. Organic cotton farmers tend to receive a higher price for their efforts. Agreements and longer-term commitments between producer groups and brands or retailers are still rare but becoming increasingly common. Ultimately, both grower and retailer are less vulnerable to the highs and lows of commodity prices if under contract. Further organic cotton farmers tend to grow other marketable crops resulting in better business prospects and more security.
WORLD ENVIRONMENT DAY THEME:
BIODIVERSITY

As one of the most fundamental elements of life on earth, biodiversity is an enormous and yet incredibly subtle sustainability theme. We hear statistics about biodiversity loss that are impossible to imagine, such as “three species dying out every hour” in The Economics of Ecosystems and Biodiversity (TEEB) Review 2008.

In terms of cotton, biodiversity is an important indicator of sustainability. There are about 500 known varieties of cotton to be found around the world. Varieties have evolved to suit geographical conditions etc; and include many intriguing characteristics and traits such as ‘colored’ cotton, extremely long and fine stapled cotton, and native indigenous or ‘wild’ cotton.

However, over the years commercial cotton has become more homogenised and research and development (R&D) has focussed, not surprisingly, on yield, fiber quality, and speed of maturation. Recently, the major seed producers have poured their research dollars into genetically modified (GM) cotton seed development. As a result the cotton seed on the market today is increasing transgenic (note: GMOs are banned from use in a number of countries). Further, ‘seed improvement’ research and development (R&D) dominated by the big agrochemical companies tends to be coupled with GM seed development. Without going into the highly debatable pros and cons of GM seed it is likely that the homogenisation of cotton through commercialization and arguably the control of cotton seed development and distribution by a small number of multinational companies, often government backed, is impacting the biodiversity of our cotton supply. This is threatening the existence of rare cotton breeds, and reducing seed sovereignty (ownership rights) for cotton growers.

Chemically-treated or GM seeds cannot be used in organic agriculture (or in Fair Trade Certified). Obtaining non-GM cotton seed is becoming increasingly difficult for organic and Fair Trade cotton farmers or anyone wanting the option; and getting hold of organic seed on a commercial basis is near impossible. The organic cotton sector is now experiencing seed availability as a key limitation to growth. Non-GM seed scarcity is also an issue for conventional cotton growers wishing to convert to organic or simply use an alternative.

Organic cotton is grown as part of the ‘farm system’ with the use of other crops to help build nutrients in the soil, protect against crop loss to pests, and provide a source of food and other marketable crops. This ‘system’ in itself goes a long way towards protecting species diversification and the border crops used of are often native species;
thus protecting local species diversification.

There are a number of organisations and companies supporting the availability and viability of non-GM cotton seed supply, species diversification and organic cotton research. In terms of seed breeding the Texas AgriLife Research, Lubbock, TX, USA are looking at traits of non-GM seed. Dr. Jane Denver, Seed Breeder at AgriLife writes us the following report:

Grand plans for a clean planet and healthy lifestyle usually start with the seed of an idea; dynamic organic agricultural systems literally start with a seed. Domestication of cotton, Gossypium species, results in a narrow genetic range in existing varieties that complement conventional, large-scale production. Much of what is available for planting seed in the USA has been converted to transgenic varieties with the addition of biotechnology traits through recombinant DNA.

Large collections of wild species and ancestral lines within cultivated species are available in cotton, but their rich allelic (genetic) diversity is rarely exploited for commercial planting seed. Mining existing genetic variation in cotton for natural traits important to organic cotton production is a major objective of my (Dr. Jane Dever’s) classical cotton breeding program at Texas AgriLife Research in Lubbock, USA. In collaboration with Dr. Megha Parajulee, cotton entomologist; Mark Arnold, entomology research associate; and David Kerns, cotton extension entomologist, a breeding program specifically for organic cotton production has been underway since September 2010.

Goals and objectives of the program were developed with the input of the Texas Organic Cotton Marketing Cooperative, and field trials will be conducted on the organic farms of cooperative members. A few existing breeding lines will be evaluated during the growing season of 2011, while segregating populations specifically for insect (thrips) tolerance will be ready for potential variety selection in 2012.

Organic cotton farmers in Texas have established excellent production methods that address soil fertility and health as well as disease avoidance. The cotton breeding program expects to address some additional production constraints starting with insect tolerance through natural host plant resistance; plant architecture to improve weed competition and harvest index; and improved fiber processing quality. Ideas from farmers and stewardship of our natural genetic resources work together for seeds of the future.

Non-GM cotton seed availability in India is now critical. India is the largest producer of organic cotton in the World, but the availability of good quality non Bt. seeds is a major challenge. There is minimal interest from large professional companies, and seed companies are mostly producing Bt. seeds.

Organic integrity is essential to the success and growth of organic cotton, and obtaining non Bt. and uncontaminated seeds, making sure they are not mixed with Bt. seeds, is an essential first step.
PHOTO: Child labour free seed project, AOFG (India)
C&A and CottonConnect are developing a source of organic cotton seeds for farmers in India. The international clothing retailer, C&A, started using certified organic cotton in 2006, and since then has grown from 2.5 million pieces to 26 million pieces in 2010, making it the biggest retail buyer globally. As C&A continues to scale up the use of organic cotton in their products, the long term availability of good quality organic seeds is vital to their future success.

C&A are seeing that part of the solution is to create the source of good quality organic seeds and this led to them working with CottonConnect, a pioneering company with a social purpose, that delivers business benefits to retailers and brands by creating more sustainable cotton supply chains.

C&A, working with CottonConnect, has co-invested with two large reputed organic farm groups, EcoFarms and Pratibha, Vasudha Organic in Madhya Pradesh and Maharashtra in India, to develop a three year organic cotton seed programme.

The seed programme uses organic breeder seeds, which are converted to foundation seed and then to commercial seeds. This programme is currently in the early stages and more information will be available as results are collated and analysed.

Philip Chamberlain, Head of Sustainable Business Development at C&A, said “Organic cotton is key to our commitment to supporting sustainable agriculture, and we felt it important to support our supply chain partners with the availability of good quality organic seed, ultimately benefiting the organic cotton community at large.”

The Child Labour Free Seed Project AOFG (Agriculture and Organic Farming Group) India is a network of grass root level farmers organizations and farmer limited companies. AOFG India organic and fair trade cotton is one of the projects supported by AOFG India and is being implemented in the poorest districts of Andhra Pradesh and Maharashtra. As part of the organic and fair trade cotton program the Child Labor Free project was initiated two years ago. It is supported by Pi Foundation - a charity set up by Pants to Poverty to develop social businesses in textile value chains.

All the seed producers are women farmers, who are members of AOFG organic cotton producer’s organizations. These women farmers are small holders and belong to scheduled castes and tribes.

The goal of the project is to eradicate child labour in cotton seed production and to produce hybrid, organic and non-Bt (non-genetically modified) cotton seed. It plans to do this by piloting and showcasing to other seed industries that cotton seed can be produced without child labour and to raise awareness among small and marginal farmers of children’s and women’s rights. The project also aims to provide AOFG organic cotton farmers with organic cotton seed at an affordable price whilst also generating income for the farmer organizations involved.

The Child Labour Free (CLF) seed project is in its early stages. Within another two to three years the project aims to supply organic, Hybrid and non-GMO seed to all AOFG India organic cotton growers.
An astounding 80 percent of biodiversity is to be found in the soil. Successful agriculture depends on the quality of the soil and just as importantly how it is conserved. According to the latest United Nations Food & Agriculture Organization (FAO) reports, on a worldwide average the area of arable land per capita shrank from 4,307 m² per person in 1961 to 2,137 m² in 2007. The reason is simple: due to non-sustainable farming practices such as over fertilization by mineral fertilizers and related soil erosion, annually about 12 million hectares of arable land is lost globally while the world population tripled in the last 100 years.

Taking into consideration deforestation and land-use-change due to the expansion of agricultural land, the agriculture sector contributes up to 30 percent of global greenhouse gas emissions. Apart from the animal husbandry based methane emissions, the majority of these emissions are so-called soil emissions, which are related predominantly to biomass, crop residue as well as fertilizer management. Alongside its impact on climate change, the agricultural sector consumes about 70 percent of the world’s available water – in the world’s fastest growing emerging economies even up to 80 percent. Apart from this, the agricultural sector is still one of the largest employers worldwide and, most importantly, is the only provider of food – therefore its sustainability is of critical importance.

Cotton is a cash crop; this means it is usually grown by the farmer to be sold directly to marketers, traders or textile manufacturers to take the fiber to the next level of production and beyond. A typical cotton production line goes from harvesting to ginning (removing the seed) to spinning, weaving or knitting, dying, cutting and sewing, and final garment/product finishing. The objective for most cotton farmers is to grow as much cotton as possible on the amount of land available. Monoculture (or near monoculture) is tough on the soil and tends to deplete nutrients over time. The use of synthetic fertilizer provides a quick-fix but is not designed to build organic content or keep soil fertile over time. It’s probably fair to say that the responsible use of artificial fertilizers balanced with other soil maintenance techniques such as crop rotation and composting can keep soil healthy. The use of insecticides and herbicides can lead to chemical contamination, reduce the number of ‘friendly’ bugs living in the soil and leach into groundwater where it goes on to do more damage to aquatic life and migrate off the original site.

What is also important is farmer ‘know-how’ and a knowledge-intensive approach to cotton production rather than a dependence on chemicals and fossil fuels. Over the past 20-30 years farmers have become dependent upon agrichemical companies.
and their products. What organic agriculture offers is the opportunity to understand the agroecological conditions and use local renewable inputs to achieve a longer-lasting and more economically advantageous way of maintaining soil fertility.

Soil & More International BV is a company based in the Netherlands, active in the setting-up and management of large-scale composting sites in developing countries as well as CO₂ emission reduction and carbon assessment projects. Soil & More was founded in 2007 on the principle that economy and ecology are inextricably linked. The company’s corporate mission is to create commercial value through ecological and ethical innovation.

Collecting agricultural biomass and transforming it to high quality compost is the key objective of Soil & More International, a company with subsidiaries in Egypt, Ethiopia, India, Mexico, Netherlands and South Africa. This not only minimizes green waste going to landfill, but also contributes to sustainable soil fertility and improved water holding capacity through organic matter enriched soil management as well as greenhouse gas emission reduction.

At its composting facilities, which are operated with local partners, Soil & More produces over 240,000 MT of compost annually and reduces about 200,000 MT of CO₂e (Carbon dioxide equivalent) per year through methane avoidance during the composting process. Applying the compost to the fields, further carbons are sequestered and due to the enhanced soil structure up to 40 percent water is saved. This composting technology is applicable at both large and small-scale farming level where recently tea- and coffee grower cooperatives in India and Kenya realized a 20-30 percent increase in productivity through using their crop residues for composting.

“We are convinced that in 5 to 10 years from now, sustainable agricultural practices will provide more cost effective food products and other commodities than goods produced by conventional farming systems. We cannot afford anything else than becoming more sustainable in an environment with growing demand and shrinking resources.” says Tobias Bandel, co-founder and managing partner of Soil & More International.

SEKEM (Egypt) uses biodynamic agriculture to build soil fertility and increase yield. SEKEM was founded in 1977 by the Egyptian pharmacologist and social entrepreneur Dr. Ibrahim Abouleish. The name SEKEM is the transliteration of a hieroglyph, meaning “vitality from the sun”. SEKEM’s goals are to “restore and maintain the vitality of the soil and food as well as the biodiversity of nature” through sustainable, organic agriculture and to support social and cultural development in Egypt. Through its diverse community of businesses and organisations SEKEM has been able to demonstrate that organic farming practices can be undertaken on a commercial scale and that improving the local environment can be done at the same time as opening up lucrative export markets for local farmers and their families.
Water is an increasingly important indicator of sustainability. Water in terms of its scarcity, availability, access, ownership, and quality is essential to life. All these issues, as well as the diversion for agriculture (sometimes up to 80 percent of a country’s water supply) are politically as well as economically, socially and ecologically relevant.

The current lack of sustainable water use for agriculture harms the environment by sucking rivers, lakes and underground water sources dry, increasing soil salinity and thereby destroying its quality, and by washing pollutants and pesticides into rivers that in turn destroy downstream ecosystems such as corals and breeding grounds for fish in coastal areas (WWF).

Cotton (along with sugar and rice) is notorious as one of the thirstiest plants on earth. It takes 7,000 to 9,000 litres of water to produce one tonne of fiber. The high dependency on water also makes cotton production vulnerable to climate change (UNESCO, Water Footprint).

Because organic cotton tends to be grown in more marginal farming areas it is more likely to be rain-fed than grown under irrigation (it is estimated that around 70-80 percent of organic cotton is rain fed); although there is irrigated organic cotton (such as in parts of Turkey, India, Texas, Egypt, and the province of Xinjiang in China). Further, not all irrigation is equally demanding; drip irrigation (which can be applied directly to the roots), whilst more expensive to set up, is far more efficient than flooding or spray techniques.

Innovative farmers are using techniques such as rain water harvesting, good composting to build up organic matter in the soil (which holds moisture) and drip irrigation to maximise water efficiency. Organic agriculture offers a solution to reviving the land and reverting the damage done. Because it requires knowledge in low impact techniques, not only will the condition of land and water be improved but the investment in upskilling farmers will have an ongoing positive effect.

In the two examples below large-scale cotton production has been directly connected to both land and social degradation of grave concern. If the environment and economy of these countries want to survive, there is a clear urgency to farm differently. The third scenario provides an example of an equally controversial situation in terms of water use but how potentially, with the right investment, sustainable development might be achievable.

The Aral Sea is the most famous example of the effects of water abstraction for irrigation. Between 1960-2000, the Aral Sea lost approximately 60 percent of its area and
80 percent of its volume (Glantz 1998; Hall et al., 2001; Pereira et al., 2002; UNEP, 2002; Loh and Wackernagel, 2004). Its salinity has risen by almost 600 percent and all native fish have disappeared. The decline of the Aral Sea is closely linked to Uzbekistan’s cotton irrigation system which draws water from the region’s two major rivers: the Amu Darya and Syr Darya and is an illustration of the negative impact cotton production can have on water supply (Environmental Justice Foundation).

Shrimp farming has played an historical role in the economy of southern Honduras, Central America, and was once a thriving industry for indigenous fishermen. Over the years competition and pressure on the industry has caused both native land right disputes and ecological degradation to the coastal area. The further development of large scale cotton, sugar cane and beef farming has pushed the region into further decline, drawing on fresh water and polluting the waterways. Degraded water quality affects not only the sustainability of the shrimp farms and the livelihoods of artisanal estuarine fishers but all aquatic life. Today, Southern Honduras is a “critically endangered region,” designated by the United Nations as an area where basic life support systems, including water and soils, are in jeopardy. Deforestation, erosion, deterioration of watersheds, the indiscriminate use of agricultural pesticides, and overgrazing has transformed the southern Honduran landscape.

GAP is an acronym in Turkish for the Southeastern Anatolian Project. The GAP region today is poised to undergo a transformation from a region of low productivity, unemployment, migration, and relative underdevelopment to a region based on new competitive advantages. The transformation will be based on sustainable production, involving a realignment of key productive sectors (agriculture, tourism and textiles) around a common strategy – featuring organic products, produced by largely renewable energy resources, under fair labour, and supporting entrepreneurship. The region wants to carve out a leading position among emerging regions worldwide.

The GAP Project pays particular attention to the sustainable use of natural resources, especially water. Public and private institutions such as water users associations give training to farmers on water use efficiency. At the same time, modern pressurized systems such as drip and sprinkler irrigation are being introduced. The government offers incentives such as grants or low interest credits to farmers to encourage implementation.

The GAP Region produces 80% of Turkey’s cotton. Currently 360 farms produce 8,000 MT of lint in 5,000 ha of land in the Region. Around 300,000 ha is being irrigated, and is expected to reach 1 million ha by the end of 2012. This indicates that vast areas will open up to irrigated farming in a very short period of time. It is expected that cotton will still be the dominant industrial crop in the newly irrigated areas. The target of the GAP Organic Farming Cluster Development Project is to produce 160,000 MT of lint on 100,000 ha of land. Thus, the GAP Region will become one of the most important organic cotton providers in the world. The project also aims to develop the textile industry in the GAP Region, so that, the region will be an important center for organic textiles.
PHOTO: Girls collecting water, bioRe (Tanzania)
The Swiss development organisation Helvetas have explored the data available for both conventional and organic cotton production and compared the CO$_2$e for each stage of cotton production. Not surprisingly, this clearly demonstrated that organic cotton production has a significantly lower impact, generating approximately 0.3 kg CO$_2$e / kg lint compared to 5.3 kg CO$_2$e / kg lint for conventionally grown cotton. Further details on Helvetas work is referenced at the end of this report.

It is becoming increasingly clear that climate change will result in entirely new weather patterns and that these will have a profound influence on agriculture at all scales (Sustainability, 2011, Issue 3, 238-253). Therefore adaptability and resilience in the production systems will both become increasingly important to enable farmers to cope with climate change and increased climate variability, and there is evidence that this is already important (see OBEPAB case study on the next page).

Important cotton producing areas such as China, India and Pakistan are becoming increasingly water limited leading to potential conflicts and loss of production.

According to CABI the overall effect of climate change on cotton growth and development is, on balance, going to be detrimental. The negative effect of water limitation will be greater than the beneficial effects of moderate temperature and elevated CO$_2$ and so cotton yield is expected to decrease under climate change. Future climate change scenarios for the Mississippi Delta, USA, for example, estimate a 9 percent mean loss in fiber yield. (Climate Change and Agricultural Commodities, CABI, 2010).

Studies, such as the FAO one discussed below, show that organic agriculture is more resilient, and better at adapting, to both wet and dry climatic stresses. Mainly because organic systems are more diverse and soil fertility is greater due to increased organic matter - potentially making it a more reliable way to grow food and fiber in an age of changing climate.

Early studies by the Natural Resources Management and Environment Department of the UN (FAO) suggest that an important potential contribution of organically managed systems to the mitigation of climate change is the careful management of nutrients and the subsequent reduction of N$_2$O emissions from the soil. These early studies are showing a potential 20 percent reduction of emission simply by not using mineral fertilisers and a compensation potential by carbon sequestration of about 40-72 percent of the world’s current annual agricultural...
Adapting to climate change is a common approach to managing climate modification. While scientists are busy experimenting with different adaptive-farming techniques, several hypotheses have suggested organic farming could be a feasible response to climate change.

Experiences of OBEPAB in Benin suggest organic agriculture is offering resilience and adaption to climate change. There has been a debate in Benin for years about the impact of climate change on agriculture. The more arid north was hit by a series of droughts in the 1970s and 1980s. The north has one rainy season, running from May to October. The south has two - from April to July and from August to October, allowing farmers to produce crops twice.

Nevertheless, anecdotal and real-life experiences reveal the adaptation capacity of organic farming; such as the two incidents of OBEPAB (a Beninese NGO-partnered organic cotton producer group) described below.

The torrential rainfall in Benin in late 2010 combined with record-high water levels on all the major rivers caused severe flooding throughout the country, which resulted in extensive damages to dwellings, livestock, crops, and social and economic infrastructure (World Bank). Last year’s floods, which hit 55 of Benin's 77 communes, from north to south, reached even areas previously considered immune (IRIN news).

However, reports from OBEPAB and Pesticide Action Network (PAN) revealed that organic farmers were more resilient to the flooding due to the variety of crops planted and to some extent the greater tolerance for stress demonstrated by organically grown plants (including cotton). Where many farmers lost entire crops, organic farmers managed to salvage enough to maintain a level of food security and even had product available for sale to local markets.

The second is related to the resilience to pest shock. During the season 2008-09, there was a very severe pest attack on cotton in the cotton basin of northern Benin. As a consequence, yields were drastically affected. Pesticide vendors and politicians were accused of having delivered fake pesticides to cotton farmers. This situation led to the resignation of the Minister of Agriculture.

However, during the same time and in the same cotton basin, organic cotton farmers did not face the same high pest pressures and their yields were among the best in their history of organic cotton production.

These two instances, even if they are far from conclusive scientific proof, suggest at least that organic farming has some potential in absorbing the impacts of climate change. There is certainly a need for more systematic monitoring of the capacity of organic farming to adapt to climate change.
Conventional cotton is sold as an export commodity (similar to minerals, grain and oil) on the world cotton market; this means the farmers producing the cotton are in fact invisible. Small scale producers are also subject to the rise and fall of the market price and to the impact of subsidies paid in some countries but not others. The volatility of the market and dependence on one crop can result in highly vulnerable economic situations for many of the world’s poorest communities. But it doesn’t have to be that way...


Ninety-four percent of Meatu’s households depend on rainfed agriculture for their livelihood. Each family has about 32 ha of land. On 4–5 ha they grow cotton, yielding 80 percent of their income. On another 2.4–3.2 ha they grow sorghum, maize and legumes, mainly for home consumption. The rest of the land is left fallow for grazing. Sixty percent of Meatu’s population live in poverty, and one-third of the children suffer from malnutrition.

The cotton season starts in September with the registration and contracting of farmers who want to grow cotton for BioRe. The contract obliges the farmer to use only organic production methods, follow the advice of BioRe’s staff, and deliver the entire output to BioRe. The company, in turn, undertakes to purchase the entire crop, provide seeds and bio-pesticides, and offer training and technical assistance. The contract is for 5 years, but the farmer can terminate it earlier if he or she wishes. BioRe can annul the contract only if the farmer violates the contract, for example by spraying chemical pesticides.

BioRe encourages farmers to work together. The company sets up farmer field schools in each location, where farmers learn about cultivation techniques, pest control, and other matters. One farmer is appointed as location leader. He or she is regularly trained on BioRe’s demonstration farm, and is expected to transfer this knowledge on to the other farmers in his location. The company also supplies implements such as ox-drawn weeders for the farmer groups to use collectively.

The actors in the cotton chain rely heavily on BioRe to finance their business.
WORLD ENVIRONMENT DAY THEME: RURAL DEVELOPMENT

PHOTO: School children, bioRe (India)
operations. The farmers have very little capital. Cotton is their only cash crop, so by the time it is harvested they urgently need money. Remei AG’s vision is that BioRe should have the opportunity to become independent, so it decided to help the Tanzanian firm build direct relations with financers.

There are three key strengths in the BioRe/Remei AG chain:

(1) BioRe’s management capacity: Over the years BioRe has shown it can deal effectively with the problems and risks of cotton production and export. Field officers pay monthly visits to the farms, so the company has realistic forecasts of expected yields. BioRe has close relationships with the farmers, offering 5-year contracts, inputs, training, and technical assistance. And BioRe builds in an assumed default rate of 12 percent into its yearly plans in case of possible setbacks.

(2) Partnership between BioRe and Remei AG: The companies have a sales contract with fixed prices and volumes. So the risk of market fluctuations is eliminated for BioRe and the farmers. Beyond the contract, there is strong commitment and interdependence between the two companies. Any issue will be resolved in close partnership.

(3) The integrated textile chain: All companies in the BioRe chain are partners who have been working together for many years. They are committed to each other and cooperate smoothly to solve problems. As chain manager, Remei AG ensures compliance with quality standards, open communication and efficient coordination in the chain.

BioRe’s farmers not only receive a price premium; as organic producers they also avoid the costs of chemicals, while their yields are similar to those of conventional cotton farmers. That gives them an income higher than conventional farmers. In addition, thanks to the training and advice from BioRe, farmers have learned to produce more efficiently, and they are now able to produce larger amounts of cotton. As a result, their income has boomed. BioRe’s farmers also report other benefits. They obtain higher yields in other crops. Their soil is in a better condition since they started rotating cotton with other crops. The soil has more organic matter, which increases its capacity to retain humidity. So a period without rainfall is not as fatal for them as it is for other farmers in the district. Finally the farmers have saved a lot of time for their family, as they have learnt to use oxen for ploughing and weeding.

BioRe now employs 66 staff, most from local villages. It is the only employer in Meatu district which provides such attractive salaries and education opportunities. BioRe’s training centre is developing as a regional centre of competence. In times of need the company supports the local community. During the drought of 2006 the company provided daily lunches to 7,000 schoolchildren for 3 months.

BioRe is a key part of a chain that
maintains high social, environmental and quality standards. The chain has grown markedly; outperforming conventional cotton chains, and generates profits for all actors.

Remei AG and its downstream partners enjoy significant growth and sound profit margins. In the last decade Remei AG has switched fully to organic cotton. Its turnover has remained more or less stable at $25 million. Note: BioRe Foundation is based in India and Tanzania.

In 2005, Nordstrom set a goal of introducing 5 percent organic cotton and worked to educate buyers and suppliers about the value of this choice and how to implement it. Nordstrom reached its goal in 2006, and began to take the next step in their organic journey. A supply chain training workshop was held to support implementation and strategic planning around expansion. Africa became a focus area, specifically Eastern Africa, as a part of reviewing regional sourcing strategies, and looking at areas where Nordstrom could have high-impact.

Eastern Africa and specifically Uganda has a long history of cotton and food production. The soil is fertile and the farming is ‘rain-fed’ making it an area with a lower footprint in regards to water utilization and potential for higher quality cotton due to climatic conditions. However, Uganda, and the region are not without challenges - civil war and strife caused a dramatic reduction in farming activity for much of the past twenty years.

During the past few years, as peace has returned to Northern Uganda, farmers have returned to work the land, typically without the use of synthetic fertilizers and pesticides. Most of the residents of this area are involved in agriculture and are extremely poor, with more than 70 percent of the inhabitants of Northern Uganda below the national poverty line.

Farmers in Uganda earn less than $200 per year from their farming operations. Most organic farmers are farming “organically by default” and have relatively low yields from their fields. Education is the key to future success for organic cotton farming in Africa.

A key partner on-the-ground for Nordstrom is the National Organic Agriculture Movement of Uganda (NOGAMU) implementing training and disseminating educational materials. NOGAMU understand the local issues and politics and have been strong leaders in the organic food movement. By Nordstrom supporting Ugandan farmers to be “Organic by Design” by increasing their knowledge of organic farming practices and helping put them into practice, it is expected that yields can be significantly increased.

Higher yields in combination with the ability to secure a fair price for their organic cotton, is expected to double farmer incomes. Additional income earned from the sale of crops grown in rotation with cotton could increase their incomes by an additional 100 to 200 percent. This would provide a massive boost to a continent plagued by perceptions of inefficiency, high costs and lack of industrial capacity.
It is uncommon for textile brands and retailers to know where their cotton is spun or knitted let alone where it was originally grown. With organic cotton the organic certification needs to accompany the fiber every step of the way.

Depending on a company’s business model, trade transactions can take place between a number of different actors within the supply chain. At the very least the organic transaction certificate will follow the cotton through its transformation from plant to garment. In these cases, whilst the certificate of the cotton is traceable, the end-customer (e.g. brand or retailer) will not necessarily know who grew it or details of production beyond legal requirements. It’s also not necessarily clear who is benefiting from the ‘price premium’ and by how much. This model may have many players or middlemen in the chain. The deal between players will depend almost entirely on market conditions at the time, or the urgency of the grower to sell his or her cotton.

**How is organic priced?** There is no formalised mechanism for arriving at a price for organic cotton. The rule-of-thumb is to take the commodity price (this is usually the price quoted in the country of origin on the commodity market at a set time) and add a percentage increase (often called a ‘premium’ but should be seen as a ‘fair price’). This premium can range from 5 to 50 percent (and beyond) over the commodity price depending on a number of factors; such as market conditions, arrangements between supply chain players, and product quality. The ‘fair price’ is supposed to cover, for example, cost of production (for farmers), investment in farming operations, organic certification, and training and extension services. It’s also meant to be enough for broader socio-economic development of the community – schooling, health and housing. We call it a fair price because it is more likely to reflect the cost of production and the ongoing viability of the business.

An increasingly attractive option is a value chain model which allows the brand/retailer or the manufacturer to develop closer and longer-term business relationships with the producer groups. Agreements and contractual conditions will be made earlier in the cotton cycle to the mutual benefit and satisfaction of both parties. Some brands, retailers or end-product manufacturers are moving towards ‘vertically integrated’ value chains, and working directly with the spinners, knitters and fabric dyers etc along the way, some even integrate their growing and ginning into the partnership.

Benefits to the producers might include prefinancing (for biological inputs, etc), guaranteed price and guaranteed purchase of product. Benefits for brands can include security of supply and thus the ability to
preplan and improved quality due to focused farm investment.

With more established partnerships we are also seeing profit-sharing, board representation, and shared investment in community projects such as schools, health centres, infrastructure, and support of local entrepreneurship. The beauty of this sort of economic development is that it is based on ‘trade not aid’ and usually involves more autonomy for the producers and a more equitable distribution of influence.

There are a growing number of brands and retailers working more closely with their organic cotton growers. One of the best examples is Anvil Knitwear and the Texas Organic Cotton Marketing Coop who, together, have pioneered organic in the US. Anvil’s journey into organic cotton started in 2007 when it first launched its AnvilOrganic® line of t-shirts. Anvil attributes its success to the fact that it turned its supply chain into a partnership. Anvil works closely with The Texas Organic Cotton Marketing Cooperative (TOCMC), which currently grows most of the organic cotton in the United States, to help develop and promote the US organic fiber market. Anvil customers such as Billabong® have used transitional cotton in their t-shirts and Disney Stores® has used organic cotton for its graphic t-shirt line.

Anvil’s support for organic cotton is based on its belief that organic cotton has less impact on the environment and evidence of this is Anvil’s comparative ‘cradle-to-grave’ greenhouse gas (GHG) life cycle analyses comparing its AnvilOrganic® t-shirt and AnvilSustainable™ t-shirt to its Anvil® Basic Cotton t-shirt. Anvil evaluated the reduction of chemical pesticide and fertilizer use resulting from organic cotton farming and, based on data provided by TOCMC, for every pound of cotton lint produced using organic farming methods, an estimated 0.0104 pounds of herbicide, insecticide, growth regulator and defoliant active ingredients and 0.3855 pounds of chemical fertilizer are not used. In addition, TOCMC evaluated the amount of water used to grow its organic cotton. It estimated that approximately 60% of their organic cotton acres are dryland. Based on TOCMC calculations, they estimated that their 2009 crop used approximately 250 gallons of irrigation water per pound of lint when you combine the irrigated and the dryland.

More recently, Anvil made a commitment to TOCMC to double the amount of U.S organic cotton acreage through both consumer and farmer education. The launch of Double It! included a video short titled “Message From Earth: Organic Matters” which Anvil released at Farm Aid in 2010.

Appachi Cotton and their new label Ethicus show us how integration benefits all. Three generations in cotton and an enduring passion for this beautiful fiber marks the family from Zamin Uthukuli in Pollachi, Tamilnadu.

Just a year after India attained independence, in 1948, the founder Mr Mariappa started the business in cotton with 6 Platt Brother double roller gins. Today, Appachi Cotton is a family owned company that
has successfully built a formidable reputation over three generations, producing some of the finest quality yarns and fabrics for international and domestic markets.

Appachi has adopted an Integrated Cotton Farming Model and started making the connection with organic cotton a few years ago. They also actively engage with scientists and researchers to introduce good quality seeds to their farmers, thereby ensuring a risk free environment for their farmers, and assured quality fiber for themselves. Mani Chinnaswamy is clear that the quality of their fiber is what set them apart 60 years ago and has no hesitation in stating that quality should never be compromised. Chinnasamy is justifiably proud of their “Seven Steps to Perfection, the Appachi way” approach which emphasises cotton selection, roller grading, hand grading of seed cotton, heap grading, slow speed ginning, loose lint grading, and pressing to ensure high quality, contamination free fiber.

In line with the above, Appachi also creates linkages between the farmers to the Government, Banks and Insurance companies and themselves.

Appachi’s foray into organic also reflected this integrated approach. Though Appachi was exporting organic yarns, they wished to tap the huge domestic potential in India and also pay homage to the incredible hand weaving traditions of India. With the able support and creative juices of Mani Chinnaswamy’s wife Vijayalakshmi Nachiar, Appachi launched “ETHICUS”, in September 2009, making products from IMO certified organic cotton and “ahimsa” or non cruel silk Century’s old hand weaving and jacquard techniques are used to create stunning saris, stoles, dupattas and men’s garments.

The ‘Eco Logic Cotton Project’ of Appachi is now being communicated to the world. The cotton is grown organically near forest land, bordering the beautiful river Kabini in South India in an area that stretches from the elephant corridors of Kabini, til the tiger reserves of the Anamalai Hills. This is surely something to celebrate anywhere in the world, but especially in India, where there is a huge chasm between wildlife policies and execution, rendering forests even more vulnerable than they have ever been. “Organic Farming in this area is a small step to nurturing our fragile forest ecosystems” says Mani, who enjoys a great relationship with his growers and who paid one of the best prices for organic cotton even in the challenging years of 2009 and 2010.

Long a pioneer in engaging with the community and investing in their welfare, Appachi carries out the work under the aegis of the ‘Mariappa Foundation’, in the name of their founder. The Foundation started a school, the ‘Nachiar Vidyashram School’ for the benefit of underprivileged children, in their village, Zamin Uthukuli, since the year 2000. Today the high standards and the school’s holistic approach to nurturing have resulted in it becoming a popular choice for children from nearby towns as well.

The Appachi cotton story is proof that by empowering your partners, practicing transparency, adopting long term goals and being visionary in your approach, you can run a socially and environmentally conscious business for several decades and still remain a pioneer worthy of being emulated!
‘Country of Origin’ is a legal requirement for apparel and other textile labelling. However, ‘origin’ in terms of customer information only goes as far back as the country where the final product was assembled. And with textile supply chains being as long, complicated and global as they are it’s little wonder no one knows every detail of their supply chain.

In some cases, a brand or retailer could tell you where their cotton was spun or knitted but the actual origin of the cotton is not as easy to identify. The reason for this is that most baled cotton (ginned) is sold and bought on the world commodity market. By the time it enters a specific supply chain it may have travelled a great distance from the fields where it was originally grown, changed hands a couple of times and mixed with cotton from other countries. Only very recently when forced and child labour in the cotton fields of Uzbekistan was exposed were brands and retailers questioned about the origin of their cotton. In fact, it’s still not uncommon for the general public to have no idea that cotton comes from a plant and grows in a field.

Cotton grown and certified as organic and/or Fairtrade can be traced back to not only the country but even the very farm it was grown on, using the organic transaction certificate. This process is important mainly for its organic integrity. An additional benefit of certification tracking systems is that stories of origin can be told - and not only about the fiber but also about the farmers and the benefits of organic to the rural communities they source from.

Equating the story of origin with a quality product is something coffee companies (for example) have got particularly good at... and it’s happening with clothes through design, innovation and sustainability agendas.

The Fairtrade cotton label has been very effective at connecting product to country of origin, but in general, brands and retailers selling are only just waking up to this huge product differentiating opportunity for their organic collections.

It’s not only at a product level either; the reputation of the entire company can be vastly improved if presented with a human face. And of course it works both ways – the opportunity for individuals within a retail company or brand to discover more about the people behind their products can be the start of something life-changing for themselves as well as the producer communities. This was something Eileen Fisher and staff discovered after travelling to Peru to find out more about the origin of their organic cotton.
WORLD ENVIRONMENT DAY THEME:

PHOTO: Farmer with colored cotton, Bergman Rivera (Peru)
Bergman Rivera was created in 2007 as the result of the merger of Bergman Sweden and Cortextil’s organic cotton projects. Since 1986, they have produced organic cotton under the White Cotton brand in southern Peru, in cooperation with small farmers.

Bergman Rivera is the first company in Latin America to be fully certified under the Global Organic Textile Standard (GOTS), from field to garment. This certification guarantees not only the traceability of the organic cotton, but also fair labour standards.

The White Cotton Project is the founding stone of Bergman Rivera. In 1986, the President of the Board, Mr Stephan Bergman, together with a small number of farmers, began experimenting with various cotton varieties and growing methods in order to find viable alternatives to conventional farming. After some years, the White Cotton Project became a reality and now works with 390 farmers.

This project is now managed by one of Bergman Rivera’s partner companies: Ecotton. It oversees 870 hectares of certified land in the valleys of Cañete, Chinchá, Ica, Santa and Lambayeque, producing both Tanguis and Pima (Extra Long Staple) cotton varieties.

The Wild Cotton Project began in 1994, when the Peruvian government decided to promote the substitution of coca leaf plantations for alternative products in the rainforest. It came to Bergman Rivera’s attention that brown colored cotton had been grown in the area for many centuries and in a completely natural way. They certified a small group of farmers and began to promote the product with their clients around the world.

Today, Bergman Rivera works with 45 farmers and their families and has established a market for this cotton in Japan and Europe. Their main clients (including Eileen Fisher and Indigenous Designs) are involved with this community and visit them periodically. During 2010, with donations from Panoco Trading from Japan and The Rotary Club of Borås Sweden, Bergman Rivera built a computer lab for the Shanao community. The purpose of this project is to provide the farmers’ children with more opportunities, giving them access to the rest of the world.

Aratex Organica coordinates and controls the whole cotton supply chain, from seed production, through ginning, carding, bleaching, dyeing, and manufacturing. Eight hundred small farmer families, benefit from the support and assistance Aratex provide. Their range of products includes: fiber, bleached cotton (for personal and health care), yarn, woven and knitting fabrics, garments, sheets, and bags.

‘Ara’ means “sky, weather, creation” in Guarani, an indigenous language predominant in the rural areas of Paraguay. “We are the story behind each of our products. We want to unite the producer with the consumer, giving soul to a product.” says Olga Segovia, manager, Aratex Orgánica.
Early organic fiber production began in the USA and Turkey in the late 1980s (Ton 2002). This was soon followed by production in Uganda, Egypt, India, and Peru. Some production was initiated by farmers seeking new markets and better ways of living (often with NGO assistance), others by companies seeking to create new models of doing business which has sustainability at the core. Here we take a look at two pioneering companies driven by a desire to introduce more sustainable business practices.

**Egedeniz** is part of the Kadioglu Group of Companies, based in Turkey, whose main line of business is agricultural products. The company started business in the early 20th Century with cotton trading and ginning as well as supplying dried fruit to exporters. Exporting grew in the 1950s. Later in the 1980s business diversified into wheat flour milling and animal feed milling. Then in the 1990s the Company started specialising in organics such as dried fruit and cereal as well as cotton. Garment manufacturing from both organic and conventional cotton also grew around this time.

Today Egedeniz – the first certified organic textile company in Turkey – sells organic cotton at most stages of processing... as fiber, yarns, knitted and woven fabrics, and final garments. Egedeniz work closely with their contracted producer groups through the Kadioglu Group. Kadioglu provides technical support for the farmers and handles sales administration. There are over 100 organic cotton farmers working on 600 ha of land – plus seasonal workers during busy times. All organic agricultural practices are in accordance with European Union organic agricultural regulations and NOP of USDA (National Organic Program of USA Dept of Agriculture) and certified by Control Union. Much of the organic fiber coming off these fields goes into Egedeniz’s own manufacturing but some of it is exported to other manufacturing centres around the world.

In addition, all processes right up to the end product are in accordance with the rules of the Sustainable Textile Standards of Control Union and GOTS (Global Organic Textile Standards). Egedeniz follow the 3Q system through all stages; social Quality, product Quality and service Quality.

All Egedeniz production operations from cotton fields through ginning, spinning and all textile processes are almost local within a radius of 250 km. This and other activities of educating farmers and its workers to care about their environment, annual tree planting events are part of carbon footprint minimization and environmental awareness policy.

Egedeniz is proud to be developing new qualities of sustainable textile products and apparel for its existing (and potential) clients.
CONSIDERED DESIGN
Nike is one of the world’s leading brands to pioneer organic cotton. They took a significant risk in investing heavily in organic cotton and sustainable practices in the mid-1990s when sustainability was considered either activism or granola. Nike was also a founding member of Organic Exchange, now Textile Exchange. Nike believes that using organic cotton is a ‘natural fit’ for them and aligns with their drive to find ways to integrate innovative approaches to environmental responsibility into their products. The use of organic cotton is embedded in Nike’s sustainable materials strategy and linked to their commitment to create innovative performance products. The Nike Considered Mission and Vision is rooted in the tradition of Nike innovation; Considered is the Nike commitment to create extraordinary performance products for athletes while managing their business within nature’s limits.

Since 1997, when Nike first purchased 250,000 pounds of certified organic cotton for use in their fall 1998 apparel products, they have steadily increased their use of organic cotton. In 2004 Nike shared their company-wide drive towards incorporating environmental sustainability into their business practices and product design. This new approach focused on a number of key areas: Nike’s overall sustainability goals include targets related to water, waste reduction, chemistry, climate change, packaging, business processes, and incorporating sustainable materials into product design.

Nike’s original goal was to blend a minimum of 3 percent organic cotton, later increased to 5 percent into all of their cotton-containing apparel materials by 2010, while steadily expanding their offering of 100 percent certified organic cotton products. By 2010 estimates showed that more than 10 percent of the cotton Nike used globally was organic, representing approximately 15,700,000 pounds of organic cotton fiber. Since Textile Exchange started reporting, Nike has remained amongst the top 2-3 retail users of organic cotton in the world. Nike has now increased its blending target to 10 percent by 2015.

Nike currently sources organic cotton fiber primarily from the United States, India, Turkey and China. Nike is piloting a new traceability process that will provide better visibility to their organic cotton back to its place of origin, which confirms organic certification, and enables Nike to more efficiently manage their cotton value chains.
More and more customers want to know where their clothing comes from and its social and environmental credentials. Some consumers are prepared to pay a little extra for an ethical or eco product. However, those in the industry say that the desire for the product itself; because of its quality or aesthetic appeal, is still the main motivator.

A powerful way to win hearts and minds is through story telling... and the more personal the experience the more powerful the story. The following ‘story of discovery’ told by the founder of the outdoor retailer Patagonia requires no further introduction...

After a trip into the San Joaquin Valley, California to see where his cotton was coming from Yvon Chouinard, founder of Patagonia was shocked at the lunar landscape of the cotton fields, the amount of toxic pesticides used in agriculture and the effect it was having on soil, water and human health; describing the cotton belt he witnessed as a ‘killing field’.

Yvon soon realised that out of all the textiles they used at Patagonia, cotton was probably the biggest villain – and it didn’t have to be. Hadn’t farmers grown cotton organically, without pesticides, for thousands of years? Indeed, only after World War II did the chemicals originally developed as nerve gases become available for commercial use as pesticides and weedicides.

This first-hand experience was a turning point for Yvon. “How could we continue to make products that lay waste to the earth this way?” In the fall of 1994, Patagonia made the decision to make all cotton sportswear 100 percent organic by 1996.

They had eighteen months to make the switch for 66 products – and only four months to line up the fabric. They found that there simply wasn’t enough organic cotton commercially available to buy through brokers... “So we went direct to the farmers who had gone back to organic methods. And then we went to the ginners and spinners and persuaded them to clean their equipment after running what would be for them very low quantities. We had to talk to the certifiers so that all the fiber could be traced back to the bale”.

And they succeeded. Every Patagonia garment made of cotton in 1996 was organic, and has been ever since.

“Although we first intended Patagonia as a way to free ourselves from the limitations of the original climbing business, precisely those limitations have kept us on our toes and helped us thrive. We still pursue climbing and surfing, activities that entail risk, require soul, and invite reflection. We favour informal travels with friends – doing what we love to do – to the camera-covered event. We can’t bring ourselves to knowingly make a mediocre product. And we cannot avert our eyes from the harm done, by all of us, to our one and only home.”
WORLD ENVIRONMENT DAY THEME:
CONSUMER AWARENESS

PHOTO: Sewing, SEKEM, Egypt
CONTRIBUTORS

Producer Groups

• AOFG India: http://aofgindia.com/AOFG/Projects.htm
• Appachi: http://www.appachicotton.com
• Bergman Rivera: http://www.bergmanrivera.com
• Chetna Organic: http://www.chetnaorganic.org.in
• OBEPAB: http://www.obepab.bj
• TOCMC: http://www.texasorganic.com

Companies

• Anvil Knitwear: http://www.anvilknitwear.us/organic
• Egedeniz: http://www.egedeniztextile.com
• Eileen Fisher (watch the Peru Chronicles): http://www.eileenfisher.com/EileenFisher/GeneralContent/Video_Archive.jsp?bmLocale=en_US
• Indigenous Designs: http://www.indigenousdesigns.com/section
• Nike: http://www.nikebiz.com/responsibility/reportingsection/
• Nordstrom: http://www.nordstrom.com
  • Pants to Poverty: http://www.pantstopoverty.com
  • Patagonia: http://www.patagonia.com/
Organisations

- Remei:  http://www.remei.com
- SEKEM:  http://www.sekem.com
- AgLife:  http://lubbock.tamu.edu
- CottonConnect:  http://www.cottonconnect.org
- Helvetas:  http://www.helvetas.org
- ICCO:  http://www.icco.org
- NOGAMU:  http://nogamu.org.ug
- PAN UK:  http://www.pan-uk.org/food/fibre-food-beauty
- SE Anatolia Turkey GAP project:  http://www.gap.gov.tr
- Soils and More:  http://www.soilandmore.nl

Further Reading

- About cotton growing in Uzbekistan:  http://www.ejfoundation.org/page142.html
- About organic cotton and climate change:  http://www.organicandfair.org/ofccc/Events/Documentation/_34_SO_1.PDF
Textile Exchange is unique in that we focus on the entire value chain, from seed procurement through to retail. We provide models and tools for collaborative planning, problem solving, product development, and point of purchase materials.

Through the work of Textile Exchange, and funding from our key partner ICCO, we now positively affect the lives of over 275,000 organic cotton farmers worldwide. Conservative estimates show that each farmer in the Global South has responsibility for a household of five people. This means that TE programs have directly and positively impacted the lives of over 1.4 million people in developing countries.