## SUSTAINABILITY: COTTON

The non-GMO cotton initiatives aim to develop a closer connection between consumers, clothes and the people behind the production, but spreading the word remains a struggle, while competition from GM seed manufacturers – and each other – adds to the complexity.

# Cottoning on

For farmers such as Jimmy Wedel in Texas, the decision to switch from conventional to organic cotton was based on the economics of the time. The chemicals weren't working in the way that had been promised; he wasn't earning much profit; he was concerned for the environment and thought there could be a simpler way. "I'd been farming for 10 or 12 years and not really made much profit; all those things came together and I thought, 'We've got to try this'."

The Texas Organic Cotton Marketing Cooperative was formed to give local farmers confidence in numbers and, not long after, outdoor brand Patagonia – known for its social responsibility ethos and forward-thinking founder Yvon Chouinard – had placed its first orders via spinning mill Herman Buhler.

That was two decades ago, and Patagonia still sources its organic cotton from TOCMC famers, after converting its entire sportswear line to 100% organically grown cotton in 1996., Jill Dumain, Patagonia's director of environmental strategy said recently: "My key advice for companies wanting to integrate organic cotton into their range would be to just start, but to do it in a way that what you adopt today, you're not going to drop tomorrow. Start at a slow and steady pace, and stay committed to your



*Fairtrade cotton farmers have the security of a minimum price.*
Trevor Leighton

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environmental decisions."

However, after years of rapid growth, organic cotton production fell by 37% in 2011, so last year's decline of 8% has been hailed as a "relief" by the Textile Exchange. Formerly known as the Organic Exchange an NGO headquartered in the US, the association which recently released its survey – representing 132,000 farmers in 16 countries – covering last year's production levels, has attributed the decline to the troubles in Syria, which had been among the top three producers in the previous few years, as well as a crisis in the availability and purity of the seeds and continued economic uncertainty. "After the significant drop of 37%, 2012's relative parity is not as daunting," says Textile Exchange managing director LaRhea Pepper. "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."

Cotton's nature as a commodity massively impacts trade: in 2010 it hit a 140-year high and China's stockpiling policy towards the back end of last year means it now has 60% of the world's reserves – negatively impacting its domestic mills which were not allocated sufficient quotas and were forced to buy from overseas suppliers at inflated prices. "This was not our intention when we formulated the policy. We didn't expect it would be implemented for so long," Gao Fang, vice-president of the China Cotton Association, admitted in June.

To try to gain an advantage or insulate themselves somewhat against price swings, many farmers have switched to organic, or sustainable, methods of cultivation. However, they tend to be intrinsically more expensive, as the conventional way can be done on a larger scale and GMO (genetically modified) varieties are made to resist disease, and so the need for other incentives is vital.

Confusingly for consumers, there are a number of such initiatives, which have similar goals but under different bodies and umbrellas: Organic Cotton, Fairtrade and Cotton made in Africa are among the biggest non-GMO users; Better Cotton and Sustainable Cotton are officially "GMO-neutral". All are competing against the heavily promoted genetic strains which the big seed producers incentivise farmers to adopt; about 50% of the world's cotton production in 2010-11 was GM.

"There is a need for a steady supply of quality non-GMO seed," explains Ms Pepper. "This is true for all farmers, including Fairtrade certified farmers, Cotton made in Africa and others."

## Organic

Organic farming aims to maintains the long-term health and resilience of soils. It depends on diverse systems of cropping, and on healthy and diverse populations of wildlife on farms to combat disease and pests without the use of external, non-renewable inputs. Sportswear giants Nike and Puma are among the top 10 users of organic cotton.




*Nike Japan introduced new 2013 kits for several of its home teams. The kits' lining features ATOM fabric – a lightweight, double-layered material made from organic cotton.*
Nike

The Soil Association says by diversifying crops, farmers insulate against crop failure, climate variability, price volatility and changes in market demand. It also claims that by eliminating the use of synthetic pesticides and fertilisers, organic cotton keeps waterways and drinking water cleaner and that organic cotton growing produces up to 94% less greenhouse gas emissions.

India has been the biggest producer of organic cotton for the past five years, last year producing 74% of the total. It saw a 1% rise in 2012, from 102,452 metric tons to 103,004mt. "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," says Lord

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*Dutch fashion fabric producer Vlisco Group will be the first partner to sponsor the entire textile chain of Cotton made in Africa.*

CmiA/Vlisco Group

Peter Melchett, policy director at Soil Association UK and an organic farmer. His association promotes organic methods and states that 95% of Indian cotton seeds are supplied by GM seed manufacturer Monsanto; while statistically it can be claimed that between 22 and 77 million cotton agricultural workers could suffer pesticide poisioning.

Africa saw a 103% increase in organically grown cotton, most substantially from Tanzania (153%). This was in part due to favourable rains: Tanzania's production leapt from 2,723mt fibre to 6,891mt on similar land area.

In the US, farmers suffered severe drought, so despite an increase in planting by 36%, the actual harvest plunged – with nearly two thirds of the planted crop abandoned. As a result, there was a 45% reduction in the overall harvest, from 2,893mt fibre to 1,580mt.

In China, production declined 35% in 2012 from 12,385 to 8,106mt due to a lack of investment in small-scale family farming, weak market demand and subsidised conventional production, as well as the challenge of accessing non-GMO cotton seeds.

## Better Cotton

Unlike organic, the Better Cotton, supported by brands such as adidas, Nike and H&M, is not labelled, and so can flow into conventional cotton supply chains. Farmers need to meet a set of minimum requirements including pesticide use, water conservation, habitat protection, fibre quality and decent work conditions and show continuous improvement to remain qualified.

Its protagonists say farmers are benefitting economically, as the training they've undergone means they no longer have to rely on chemicals, which can be as much as 60% of outgoings, and they operate more efficiently. Detractors however say they have no premium or guaranteed higher price and so brands are benefitting from making farmers work harder without paying more.

In 2012, the Better Cotton Initiative (BCI) licensed 165,000 farmers who produced 670,000mt of Better Cotton lint, compared with 200,000mt in 2011 and 35,000mt in 2010. Initial forecasts for 2013 are showing further growth. It plans to expand production worldwide and has laid down the ambitious target of Better Cotton accounting for 30% of overall cotton production by 2020.

## Fairtrade

While many consumers do not appreciate the value of organic, most will understand the concept of Fairtrade. 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. It was set up in 2005 to counter the subsidies imposed by some countries that led to a collapse in prices, and now encompasses about 60% organic and 40% conventional.

"A lot of the other initiatives have more of an environmental focus which might persuade some of the brands to choose them; but I think one key difference is that BCI doesn't have much consumer understanding behind it whereas Fairtrade has high level of awareness – there's an awful lot of empathy for the social benefits it delivers," says Rachel Hearson, an account manager at the Fairtrade Foundation.

"More and more big companies are moving towards sustainable sourcing strategies, which

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| Production of cotton fibre (million tonnes) in 2012 | |
|---|---|
| Bayer e3: | 27,143 |
| Better Cotton: | 455,000 |
| Cleaner Cotton: | 703 |
| CmiA: | 163,000 |
| Fairtrade: | 18,330 |
| Organic: | 138,813 |

*Source: The Textile Exchange*

they're working on behind the scenes but not passing the message on very well to the consumer. If you take brands like H&M and Nike, they buy huge amounts of organic cotton, but they don't necessarily communicate it to their end consumer, it's just part of their company's DNA, which is what we're moving towards now."

A drop in sales of Fairtrade cotton since 2009 has had a severe adverse effect on producers' income, particularly in West Africa. The International Cotton Advisory Council found that "a major drawback 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".

To try to counter this, the association is set to introduce a new model next year, which will see Fairtrade Cotton fed into supply chains in a similar manner to Better Cotton. "Companies are still buying Fairtrade but the cotton will go into their supply chain differently, and with a different message – so that will allow us to develop scale, which we haven't had until now," adds Ms Hearson. "We will run both methods alongside each other so companies can still choose how they want to present it to their customers."

## Cotton made In Africa

The Cotton made in Africa (CmiA) scheme was set up in 2005 by Dr Michael Otto of German conglomerate the Otto Group, and monitors the social, economic and environmental development of smallholder cotton farmers and the associated ginneries. The Aid by Trade Foundation, which the scheme is part of, "helps people to help themselves", by means of trade.

The scheme published a study at the beginning of the year which said CmiA has a 60% lower carbon footprint and a 90% lower water footprint than conventional cotton, the result of the absence of mechanisation. CmiA growers use 99% "green" water, the study said, whereas conventional producers typically are able to use only 40% green water.

In 2010-11, around 83,000mt of lint cotton was produced on about 290,000 hectares of land. In the most recent cotton season, CmiA expanded the area of cultivated fields by around 85% to roughly 564,000 hectares and showed a production rise of around 96% to 163,000mt.

"The use of African cotton makes our Africa collections even more authentic, and thus more desirable," said Puma's former CEO, Jochen Zeitz, when the company signed up to the initiative. "At the same time our support for Cotton made in Africa is a contribution to improvement in the quality of life of many African smallholder farmers, and to implementation of ecological standards in Africa."

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## Sustainable and Cleaner Cotton

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 programme operates without the use of genetically modified seed and reports consistent chemical reductions of between 50% and 73% compared with conventional fields in the same region.

## Obstacles

However, despite the benefits of all these schemes, there are a number of obstacles – economic and physical. Jeremy Brown, an organic farmer from Texas, says, "Organic cotton has different challenges; we have to build the soil profile with a lot of nutrients, it's a process that takes time. Weed management is a problem, they take the moisture and the nutrients, and because we have to mechanically remove them, a challenge a lot of the time is labour."

The other major drawback is demand. Ms Hearson, who says Puma has been the only big sportswear brand to use Fairtrade, thinks while consumer understanding is important, the onus is on the brands to opt for the non-conventional cotton. "Consumers want to trust that the brands are doing the right thing and making it easy for us," she says.

Sarah Compson, standards project manager at the Soil Association, agrees it's a two-way process: "Brand commitment is absolutely key. Farmers need to know there will be a sustained market for their organic cotton in order for it to make sense for them to grow it. However, brands often don't want to make long-term commitments unless they're sure their customers will want it, therefore it's also about educating consumers so they can let brands know that organic is important to them."

Brands and retailers all report that they anticipate increasing the options in their sustainable cotton portfolios - organic in particular, according to the Textile Exchange - but the majority are not taking the necessary steps. "What is abundantly clear is that brands and retailers lack adequate systems to capture the growing level of complexity involved in using sustainable materials," it said.

It hinted that the competition between the initiatives could also be a problem, seeing a "shift by some companies from established programmes, such as organic and Fairtrade, to newer initiatives offering a lower barrier to entry without fair prices associated with the initiatives".

"There are a number of other initiatives out there that claim to be sustainable/non-GMO, and we consider this to be a good sign that the industry is cleaning up and brands are making commitments towards improving their supply chains," says Ms Compson. "Many of these initiatives represent a step on the way towards brands becoming more sustainable."




*Puma says using CmiA makes its African collections more authentic.*

*Puma*

The panel of farmers interview by the Exchange for its report recommended a strategy of "research, education and communication" – "to increase everyone's understanding of fibre and food systems and eventually to decommodify cotton by developing a closer connection to our clothes and the people behind the production".

They suggested a holistic value chain that integrates all actors into a transparent sequence from farmer to retail customer, and sharing the profits fairly among all in proportion to their risk (giving more than is currently afforded to tier four, or farm level).

To promote cohesion, the Exchange is seeking funding to build a shared platform to improve access to knowledge and stimulate investment in seed suitable for organic and other alternatives to GMO. "This will improve access to knowledge and hopefully stimulate investment in seed suitable for organic and other alternatives to GMO," says Ms Pepper. It is working with CottonConnect, FiBL, Louis Bolk Institute, AgriLife Texas and Helvetas on the scheme.

"I think people increasingly recognise that environmental sustainability and social justice go together," concludes Lord Melchett, "and that we need radical changes all the way from the farm through the whole of the supply chain to achieve products the industry can be proud of, and which will help us leave a planet fit for our children and grandchildren."

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