



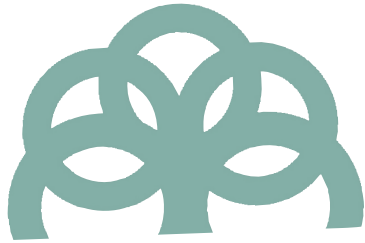
COTTON HORIZONS

2014

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NEWS



The complete guide to cotton standards, sustainability initiatives and regional programmes: facts and greenwash



COTTON HORIZONS

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Foreword

Following on from the success of the *Insider's Guide to Sustainable Cotton*, which was published by MCL Global in 2011, I'm delighted to present this new *Cotton Horizons* report written by regular *Ecotextile News* correspondent Simon Ferrigno.

We've produced this independent and objective overview to map out the increasing number of cotton standards and new environmental initiatives; and to bring some clarity to a market, which is now looking a little overcrowded.

The global cotton sector has made great environmental progress over the past two decades in terms of pesticide and water reduction in particular, but there still remains a frustrating lack of a unified, industry-wide approach to 'sustainability' in cotton, which not only causes confusion among consumers and retailers – it ultimately benefits suppliers of synthetic textile fibres.

This situation is despite the fact that apparel brands and retailers are now much more open and engaged when it comes to developing sustainable cotton supply chains. They can see that cotton standards offer consumers product credibility, but despite more than a decade of work, the amount of cotton being sold as 'sustainable' is still only a small fraction of conventional cotton. In the case of organic cotton – volumes have actually decreased.

So why is this?

Cotton Horizons takes a look at the current state of cotton and sustainability standards in Autumn 2014 and outlines the reasons behind the apparent low demand where few cotton initiatives achieve anything close to 100 per cent market uptake.

In addition to the proliferation of standards, coming challenges are addressed such as marketing, connecting the supply chain, pricing structures, yields, GM, brand communication and national policies.

Cotton Horizons also presents the views of both standards and stakeholders, but ultimately provides both fact and opinion along with plenty of guidance, for all stakeholders in the global 'sustainable' cotton supply chain.

This is a unique, fair, balanced, independent and authoritative 'state of the play' in the cotton sector, which given the initial interest, may itself in future morph into a more regular publication.

John Mowbray
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The major cotton standards and programmes

There are now around a dozen important cotton sustainability standards and initiatives. While many include elements of IPM (see page 11), there are differences in scope, notably on the use of chemicals, biotechnology (GM seed) and social and economic issues. There can also be limitations on regional and geographical coverage (Fairtrade, limited to poorer countries) or countries (MyBMP or ABR). Some cover all or part of the supply chain, others only address cotton until the gin. The options

for full or partial traceability vary, for example with Mass Balance approaches (where cotton bought does not have to be used or traced, simply offset), which makes supporting sustainable cotton cheaper, but causes concern due to the lack of full traceability and the linking of impacts to actions.

The sections below aim to provide interested parties with an overview of each initiative, including the latest *available* data. ○

The major sustainable cotton standards

Sustainable cotton principles

Most standards (which can be analysed against the triple bottom line approach to sustainability) also adopt some, or all of, the principles of Integrated Pest Management (IPM), or Good Agricultural Practices. Agro-ecological approaches are also referenced, and most standards also incorporate social and economic elements. Social elements are commonly based on ILO standards and/or the Ethical Trade Initiative.

Agro-ecology

Agro-ecology looks at the farm system as a whole, and its relationship to the wider ecosystem. Core principles include the importance of soil fertility, water conservation, agro-biodiversity and minimising the use of

agrochemicals. Commonly, there is also now a focus on the social and economic interactions between ecosystems and people.

Organic, IPM and conservation farming all borrow from agro-ecology. Practices that will be familiar to those who look at sustainable cotton include conservation tillage, inter-cropping, crop rotation, fallows, cover crops, mulching, composting, manure, nitrogen fixing crops, biological pest management, water harvesting, agro-forestry, and an emphasis on using local resources. A central feature of most agro-ecological farming systems is resilience (to climate change or water stress). Agro-ecological systems are also more resistant to long-term pest problems. Large scale farming systems can adopt many agro-ecological

principles, and some cotton standards are examples of this, such as BCI, CmiA or MyBMP.

Agro-ecological practices are demonstrably effective, and can lead to average yield increases of 113 per cent while improving soils, sequestering carbon and reducing pesticides usage (Silici 2014).

However, agro-ecology is a knowledge intensive system. It does not simplify practices by replacing knowledge with chemicals and technology, and as such puts off many due to the up front costs of knowledge, management and training.

Integrated Pest Management (IPM)

IPM has its origins back in the 1950s, as a response to the problems of inefficient pest control; each crop and pest situation is looked at with regards to the agro-ecosystem and with a view to reducing pesticide use and managing insect resistance⁴.

The United Nations Food and Agriculture Organisation (FAO) definition of IPM is perhaps the most commonly cited:

“Integrated Pest Management (IPM) means the careful consideration of all available pest control techniques and subsequent integration of appropriate measures that discourage the development of pest populations and keep pesticides and other interventions to levels that are economically justified and reduce or minimise risks to human health and the environment. IPM emphasises the growth of a healthy crop with the least possible disruption to agro-ecosystems and encourages natural pest control mechanisms.”⁵”

Integrated Pest and Production Management (IPPM)

IPPM, an extension of IPM, and widely trialled by UN FAO, aims to raise yields, reduce pesticides usage and replace external inputs with cheaper, less dangerous and locally available alternatives. IPPM emphasises integrated crop protection but also aspects such as soil fertility management. Farmer Field Schools are a critical element of this system.

The use of green manures and cover crops has significant benefits for soil carbon content and nitrogen fixation, which both improves soil fertility and reduces greenhouse gas emissions. In Cotton IPPM in Mali, pesticides use fell from 4.5 litres per hectare to 0.25 – a 94 per cent reduction.ⁱⁱⁱ

The FAO programme also focussed on optimising the use of inputs, including ‘elimination or large-scale reduction of toxic pesticides (i.e., WHO category Ia, Ib and II pesticides)’.

Good Agricultural Practices (GAP)

Good Agricultural Practices are promoted by FAO following its success with the Farmer Field School (FFS) approach to get the best results at the level of a production area. Techniques promoted can include soil fertility management, integrated farming and livestock and agro-forestryⁱⁱⁱ⁶ ○

⁴ See ‘An Insider’s Guide to Cotton & Sustainability’ for more.

⁵ <http://www.fao.org/agriculture/crops/core-themes/theme/pests/ipm/en/>

⁶ See ‘An Insider’s Guide to Cotton & Sustainability’ for more.

ⁱ Settle W., & Garba H., 2009

ⁱⁱ Settle W., & Garba H., 2009, Pretty et al., 2011

ⁱⁱⁱ <http://www.fao.org/prods/gap/> Accessed December 2011

Sustainable cotton standards

Organic

Organic farming is defined by the International Federation of Organic Agriculture Movements (IFOAM) and by various regional and national laws, of which the best known are the European Union (Regulation 834/2007), US National Organic

Program (NOP) and the Japanese JAS. There are no specific cotton regulations, as these are general organic farming standards. Other regions and countries such as East Africa and India now have their own regulations, usually referencing one or the other or both of the EU and US regulations.

Inducing Sustainability Evaluation (RISE), and the FAO Sustainability Assessment of Food and Agriculture Systems (SAFA)^{25]} although sadly the ISEAL Code was ignored.

That said, the criteria used to weight indicators and exclude some are debatable. Notable exclusions include the Codes of Conduct on pesticide use and conventions on pesticides (Rotterdam and Stockholm), the FAO Code of Conduct on pesticides, pesticide protection

equipment cleaning, types of irrigation, soil erosion, and poverty ratios, among others.

Case studies and available impact data

There is surprisingly little available data on most initiatives, and much of it shows some bias towards the system under consideration, or is measured in ways that make it difficult to compare to other standards. Organic, Fairtrade and CmiA probably have more data available, while others

SUSTAINABLE STANDARDS INFORMATION						
Standard	Geographical scope	Producing countries	Year started	Lint production/year (tonnes)	Seed cotton production/year (tonnes)	Main markets
Fairtrade	Low and medium developed countries	Burkina Faso, Cameroon, Mali, Senegal, India, Kyrgyzstan, Egypt	2004	x	50,600 (2011/12)	UK, France, Switzerland, Germany, Denmark, Finland.
Organic	Global	India, China, USA, Turkey, Peru, Paraguay, Tanzania, Uganda, Benin, Burkina Faso, Senegal, Brazil, Kyrgyzstan, Tajikistan, Egypt, Mali, Nicaragua, Israel	1989	109,826 (2012/13)	310,332 (2012/13)	USA, EU, Japan; smaller markets in South America, Latin America
BCI	Global	India, Pakistan, China, Brazil, Mali, Mozambique, Senegal, Tajikistan	2005	966,000 (2012/13)	x	Not traced or labelled
CmiA	Africa (production); Global (markets)	Zambia, Mozambique, Malawi, Zimbabwe, Ivory Coast, Ghana, Cameroon ²⁶	2005	142,536 (2012/13)	336,000 (2012/13)	Europe (Germany, UK, etc.)
Brazil ABR 1. ABR/BCI	Brazil	Brazil	2013/14		x	932,761 (seed)
2. ABR alone	Brazil	Brazil	2013/14		x	186,095 (seed)
Cotton Connect	India, Pakistan, China	x	x	Unknown	x	x
MyBMP	Australia	Australia	2010	Around 10% Australian cotton	x	x
Cotton Leads	Australia, USA	Australia, USA	2013	Unknown	x	x

SUSTAINABLE SCHEMES HISTORICAL PRODUCTION DATA (IN TONNES OF LINT UNLESS SPECIFIED)							
Scheme/Year	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014 (estimates)
BCI	x	x	35,000	200,000	623,000	966,000	1,780,000
CmiA	x	x	x	96,982	183,959	142,536	
ABR/BCI ABR	x	x	x	x	x	x	932,761 (seed) 186,095 (seed)
Organic	145,872	209,598	241,698	151,079	138,819	109,826	
Fairtrade		73,000 (seed)	55,700 (seed)	48,100 (seed)	50,600 (seed)	Not yet known	

²⁵ See <http://thecosa.org/>, <http://www.fieldtomarket.org/>, <http://www.hafl.bfh.ch/en/research-consulting-services/agricultural-science/sustainability-and-ecosystems/sustainability-assessment/riase.html>, and <http://www.fao.org/nr/sustainability/sustainability-assessments-safa/en/for> for more details.

²⁶ Programmes have existed in Benin and Burkina Faso. Burkina Faso continued to grow to the SCS standard as far as we know, while Benin is suspended due to disputes between the government and cotton companies.

GROSS MARGIN ANALYSIS OF FIELD SURVEYS IN BENIN AND ZAMBIA

	Total	Benin	Zambia	Organic	FT	CmiA	CmiA/Benin	CmiA/Zambia
Average farm area (ha)	10	9	11	10	4	9	7	11
Average cotton area (ha)	2	3	2	3	2	2	2	2
Average cotton seed yield (kg/ha)	972	933	1,053	836	567	1,064	1,079	1,053
Average cotton revenue/ha	324	389	228	398	235	312	428	288
Average soil fertility costs	28	42	3	36	0	26	57	3
Average pest control costs	43	50	29	18	40	45	66	29
Average land preparation costs	14	4	26	0	15	17	3	26
Average weed control costs	18	16	24	9	0	25	26	24
Average labour costs	88	130	17	165	91	63	126	17
Average other costs	22	22	0	0	0	22	22	0
Average total costs	195	244	107	227	145	180	281	107
Average gross margin	129	145	121	171	90	132	147	121

either do not publish, charge for it or consider that it is too early to measure impacts (BCI).

Among recent comparative studies, Ferrigno & Monday (2013) looked at the impacts of organic, organic-Fairtrade and CmiA in Africa. One of the main conclusions was that “Of the impacts emerging from the schemes, some seem to be common to all, although there is variability... This suggests that how schemes are implemented and the consistency in staff capacity, training and understanding of the standards are major factors in determining impacts and success.”(Ferrigno & Mnday, 2013). Another conclusion was that it was wrong to market or support just one initiative, in view of the difficulties of marketing and selling sustainable cotton – support should be offered to the sector, and the initiative best placed to help a particular group of farmers: what is best, where it will do the most good and lead to the greatest market impact.

The situation is further complicated as the investment in standards varies widely, and many have insufficient funds for R&D and seed development. Where organic cotton is frequently derided for low yields, it is also starved of funds for seed and research, and when productivity is supported, the results can be enormous. Benin’s organic cotton yields rose 30 per cent in trials with new pest control techniques in recent years (Mensah et al., 2012).

Sustainability initiatives are also affected by general cotton sector problems overall, including

weak research, policy frameworks, extension systems, and infrastructure, high financial costs and so on. These programmes do not operate in a vacuum, and these problems are among the reasons we have standards and why it is of concern that certain origins from richer cotton regions are being labelled sustainable, as it detracts from the real problems standards seek to address. That said, more money into services and structures could also solve many of these problems.

Standards are also impacted by price volatility. The goal of raising incomes may be achievable when prices are high or even average, but any drop reduces or eliminates gains.

Few initiatives are so far self-sustaining. Generally, they can be self-sustaining if they reach a certain scale and have sufficient market security. If benefits such as soil carbon sequestration could be quantified and rewarded in the market, this would be even more secure. However, some existing studies are flawed in looking at the economic side. One study for example “did not account for the costs of labour or time spent in preparing botanicals or other activities. ... some input purchase costs are substituted by labour and materials collected (or purchased) for botanical pesticides or fertilisers, and entail labour and/or ingredient costs... multi-year data is really needed to make an accurate assessment of scheme performance and to compare them.” (Ferrigno & Monday 2013).

Conclusions

The low level of market penetration by sustainable cottons which are verified and certified is frightening. Growth in volume is being financed before stability and services to farmers, while the market seems unwilling to fully back the available cotton. Ultimately, brands and consumers are needed but seem unwilling (so we are told) to pay any additional costs or premiums through the market – this needs to be addressed somehow, either through more consumer facing education, or more lobbying to make non-sustainable cotton accountable for its impacts through fiscal measures. Both actions are probably needed.

Many brands are willing to engage in sustainable cotton. Some have made significant investments and commitments, but there remain gaps between what brands need and what standards offer, as there is a difference between what brands are willing to do and what standards think they should do.

As standards proliferate, competition increases between them, at least in the market, and few mechanisms exist to help sustainable cotton enter the supply chain. This

has to be addressed before rapid growth leads to crisis.

There is also a continued need to ensure standards are economically sustainable in themselves. There will be no such sustainability without “better marketing and market security of sales” and attention to the costs and benefits of sustainable cotton for promoters and traders (Ferrigno & Monday 2013).

Donors and investors such as brands need to remember that scale is important, so rather than initiate new programmes, existing projects need support to reach scale, provided there is evidence of a potential market; we need to spend more time developing markets before raising production (we could spend more time identifying those programmes and field level projects that are best in class). Oversupply benefits no one, and is not a sustainable long-term solution.

More evidence of real impacts is also needed. Evidence that is accurate, unbiased and comparable. Again, donors could usefully fund more impact assessment on a large and comparable scale. ○

Notes

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