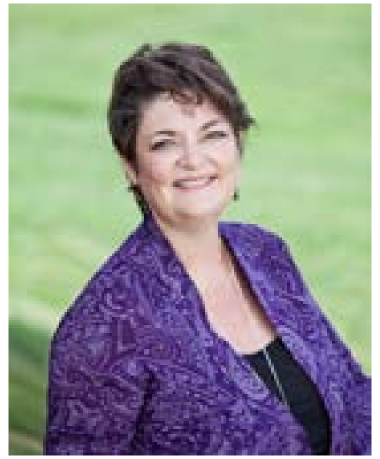
TextileExchange

Creating Material Change

2013 Preferred Fibers Market Report Executive Summary

Letter from: La Rhea Pepper, Managing Director of Textile Exchange



We work in a dynamic marketplace. The 2013 global fiber market was 85.4 million tons, which consisted of 61.8 percent synthetics, 30.2 percent cotton, 6.8 percent manmade cellulosic and 1.3 percent wool. Overall demand is projected to grow primarily in synthetics and manmade cellulosics.* Those fibers went into the $201 billion apparel market, up 2 percent over last year. As an organization with a mission to inspire and equip people to accelerate sustainable practices in the textile value chain, these numbers provide a guiding light on where we need to focus our attention. This information is a starting point, but we need to ask ourselves: "Where do we have the power to make the most meaningful changes?"

This year, Textile Exchange provided the tools and information for companies to take steps along the sustainability continuum. FastFacts updates and the Chemical Snapshot Series heralded the launch of the Knowledge Center, which manages content and consulting. Our Integrity team has continued making progress on standards and certifications with the release of the Recycled Content Standard in October 2013, their work on the Global Recycled Standard revision and the Responsible Down Standard. At the same time, the Organic Cotton Roundtable formed two task forces; business models and seed supply. Textile Exchange has also engaged with the market by providing guidance and consulting to a variety of companies on sustainable fiber strategies. The positive steps companies are making toward improving their textile supply chains and the support for this work from our Textile Exchange staff is to be applauded. Progress is being made.

In our 2013 Market Report Survey, we learned that 72 percent of respondents now have a corporate sustainability vision and 52 percent have a material sustainability strategy, with 44 percent having a target for incorporating their preferred fibers. Target dates range from 2016 to 2020. Only 33 percent use an index to select preferred materials, however, when using indexes, 29 percent say they have a high influence in fibers choices. These are improvements over last year. However, there is still room for significant growth.

It is also evident that each brand must have a cotton strategy in order to drive meaningful change. The good news is that there are a number of options out there that can be implemented based upon regional sourcing needs. The cotton portfolio of preferred choices includes Cotton Made in Africa, BCI, Fair Trade, e_3, and of course organic, which we consider the gold standard. Shortly we will be releasing our annual Organic Cotton Farm and Market Report. All indicators show that the demand for organic cotton continues to grow. The challenge for stable growth is forming stronger links and the implementation of good business models to accelerate this growth.

Every year the specifics of our mission become clearer. The results of our market survey show us where our efforts and support are still required. There is huge opportunity for improvement in how we select and make and/or grow fibers, especially those we use the most. We have an enormous task ahead of us if we are to attain our vision of a global textile industry that protects and restores the environment and enhances lives. We agree with Wes Jackson when he said: "If your life's work can be accomplished in a lifetime, you're not thinking big enough."

All the Best,

LaRhea Pepper

Executive Summary

The preferred fibers covered in this report were chosen based on global market size, Textile Exchange's Material Snapshots and the values set by both the Sustainable Apparel Coalition (SAC), Higg Index, MSI and Made-By Environmental Benchmark for Fibers. A look at these tools provides useful information for companies when making decisions on which fibers are appropriate for use according to their company values.

Recycled polyester and biobased synthetics appear in this report based on the fact that synthetic fibers are overwhelmingly the largest portion of the fiber business. The second largest group is cotton. A deep dive on cotton will be provided in our organic cotton market report to be released later in 2014. Cellulosics are third, and have the potential for growth based on future need for fiber and potential issues surrounding available land for growing other fiber crops. Animal-based products are last, and, while small, are important to the members of Textile Exchange.

The charts below highlight cotton fibers and preferred synthetics, cellulosics and man-made fibers:

Preferred Cotton

	Bayer e_3	BCI	Cleaner Cotton	CmiA	Fairtrade	Organic
Investment Model	Contract growing	Membership fee[1]	Premium to producers	Volume based license fee	Fixed minimum price and social premium	Market premium to farmers
Verification/Certification	Self-evaluation and 3rd party audits	Partial 2nd and some 3rd party	2nd party monitoring	3rd party program verification	Certification by 3rd party	Certification by 3rd party
Chain of Custody System	Field to product	Field to gin	Field to gin[2]	Field to gin[4]	Yes	Yes[5]
Product Label	Yes	No	Optional[3]	B2B and B2C	Yes	Yes
GMO	Yes	Yes	No	No	No	No
Countries of Production	USA	Brazil, India, Mali, Pakistan, China, Mozambique, Tajikistan, Turkey	USA	Zambia, Mozambique, Malawi, Zimbabwe, Ivory Coast and Ghana	India, Cameroon, Mali, Senegal, and Kyrgyzstan	India, Turkey, China, Tanzania, USA, Mali, Peru, Uganda, Egypt, Burkina Faso, Benin, Kyrgyzstan, Nicaragua, Paraguay, Israel, Brazil, Senegal, Tajikistan
Website	Certified FiberMAX	Better Cotton Initiative	Sustainable Cotton	Cotton made in Africa	Fairtrade	TE Farm Hub

1. and farmer support contributions
2. some decoupling from market exists through individual contracts
3. chain of custody to product optional
4. transaction certificate
5. labeling possible - depends on retailer

At Textile Exchange, we use the definitions below for preferred fibers:

Preferred describes a choice made in selecting better ecologically and socially progressive options through the consideration of impacts and organizational priorities.

More sustainable is a way to convey a message similar to that above; that a fiber, material or product has been selected based on a comparison to other options.

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Preferred Synthetics, Cellulosics and Man-made Fibers

Category	Fiber	Brand Name	Feedstock	MFG Process	MFG Locations	% Volume	Global Volume*	Key Suppliers	Growth Expectation	LCA
Synthetics	Recycled Poly	Repreve	post-consumer waste	mechanical recycling	US/China	N/A	5.5 million tons recycled fiber of a total 46.9 million tons virgin PET fiber market	Unifi	Increase	Yes
Synthetics	Recycled Poly	Regen	post-consumer waste	mechanical recycling	Korea	N/A		Hyosung	Increase	Yes
Synthetics	Recycled Poly	Top Green	post-consumer waste	semi-chemically (ethylene glycol is added to re-polymerize for higher viscosity after mechanically recycled)	Taiwan/China	N/A		Far Eastern Textiles	Increase	Yes
Synthetics	Recycled Poly	Eco Circle Fiber	post- and pre-consumer waste	chemical recycling	Japan	N/A		Teijin	Increase	Yes
Synthetics	Recycled Poly	ECOPET	post-consumer waste	mechanical recycling	Japan	N/A		Teijin	Increase	Yes
Synthetics	Recycled Nylon	Repreve	post-industrial waste	mechanical recycling	United States, China, Brazil	N/A	<0.1 million tons of a total 4.0 million tons PA fiber market	Unifi	Increase	Yes
Synthetics	Recycled Nylon	Econyl	post-consumer waste, i.e. end-of-life products made from polyamide 6 including fishing nets, fluff (the top of carpets and rugs) and rigid textiles; pre-consumer waste such as oligomers, scraps and others, generated from the production of nylon 6	chemical recycling	Ljubljana, Slovenia	N/A		AquaFil	Increase	N/A
Synthetics	Recycled Nylon	Mipan Regen	pre-consumer/virgin	chemical recycling	Korea	N/A		Hyosung	Increase	No
Synthetics	PLA	Ingeo	corn sugar	Corn sugar converted to lactide. Lactide polymerized to to produced PLA, extruded, melt spun, drawn	USA	100%	150,000 tons for both fiber and packaging	NatureWorks	Increase	No
Synthetics	PTT	Sorona	corn sugar & crude oil refined into naptha	Propane diol from corn sugar and terephthalic acid polymerzed to produce PTT, extruded, melt spun, drawn	USA/China	100%	65-70,000 tons	Dupont	Increase	Yes
Synthetics	Poly-propylene	CoolVisions	crude oil refined into naptha	monomer is polymerized to produce PP, melt spun and drawn	Covington, GA	N/A	7 million tons	FiberVisions	Increase	N/A
Cellulosics	Lyocell	TENCEL (R)	FSC certified wood or pulp	pulping, one solvent, low toxicity closed loop wet spinning	Europe	98%	N/A	Lenzing	Increase	Yes
Cellulosics	CFF	CRAiLAR	flax (hemp coming soon)	harvesting, retting, water based enzyme process, spinning	Europe	100%	12,500 MT	Crailar	Increase	No
Animal	Organic Wool	N/A	sheep	Harvesting, scouring, spinning	AUS/NZ producing countries	N/A	N/A	N/A	N/A	No
Animal	Recycled Wool	N/A	sheep	Sorting, carding, spinning	Italy/India	N/A	N/A	N/A	N/A	No
Animal	Silk	N/A	silkworm, Bombyx mori-fed mulberry tree leaves	cocoon is cooked in a soap solution, unreeled & filaments twisted into one strand	China/India	N/A	N/A	N/A	Increase	N/A
Animal	Down	N/A	duck or geese	Harvesting, drying, sorting	Downlite - USA (70%), China (30%) Allied - China (25%), USA (75%)	N/A	N/A	Downlite, Allied	Decrease	In process

*The information on this chart was provided by suppliers or is publicly available information. The chart is not a complete picture of the market, but reflects highlights of the supply chain.

Top 5 Users
of recycled polyester!

#1 Nike

#2 Puma

#3 H&M

#4 G-Star Raw

#5 prAna

We hope to encourage the kind of participation and friendly competition we get in the Organic Cotton Top 10 lists. Since we will continue to publish our Organic Cotton Report, we will save our Organic Top 10 for that report. For now, we will also highlight the logos of companies using other preferred and more sustainable fibers. We hope that in future issues we will have survey results allowing for a Top 10 on a wider variety of preferred fibers.

Leading users of TENCEL®

Leading users of TENCEL® non-wovens

Leading users of Sorona

Standards and Certification Update:

Our Integrity team has continued making progress on standards and certifications with the release of the Recycled Content Standard in October 2013, their work on the Global Recycled Standard revision and the Responsible Down Standard.

Below is an outline of Textile Exchange Standards and other Industry Standards relevant to preferred fibers:

Textile Exchange Standards

Name	Authors	Date Released	Input Material	Chain of Custody	Processing Requirements	Product Labeling
Content Claim Standard (CCS)	TE Integrity Team, OIA MTWG	Sep-12	any raw material	yes	no	no
Organic Cotton Standard (OCS)	TE Integrity Team, OIA MTWG	Mar-13	organic materials	yes	no	yes
Responsible Down Standard (RDS)	TE, Control Union, The North Face	Jan-14	feathers from domestic waterfowl	yes	no	yes
Recycled Claim Standard (RCS)	TE Integrity Team, OIA MTWG	Sep-13	recycled materials	yes	no	yes
Global Recycled Standard (GRS) v3	GRS IWG	May-14	recycled material	yes	social, environmental, chemical	yes

Other Industry Standards

Name	Authors	Date Released	Input Material	Chain of Custody	Processing Requirements	Product Labeling
Global Organic Textile Standard (GOTS)	GOTS IWG	1991	organic material	yes	social, environmental, and chemical	yes
OEKO-TEX Standard 100	OEKO-TEX Association	1992	n/a	n/a	chemical (final product testing)	yes
Sustainable Textile Production (STeP) by OEKO-TEX	OEKO-TEX Association	2013	n/a	n/a	social, environmental, chemical	yes
FSC Certified	Forestry Stewardship Council	1993	forest products	yes	no	yes
USDA BioPreferred	US Department of Agriculture	2013	bio-based content	no	no	yes
bluesign®	bluesign technologies ag	2000	n/a	n/a	environmental, chemical	yes

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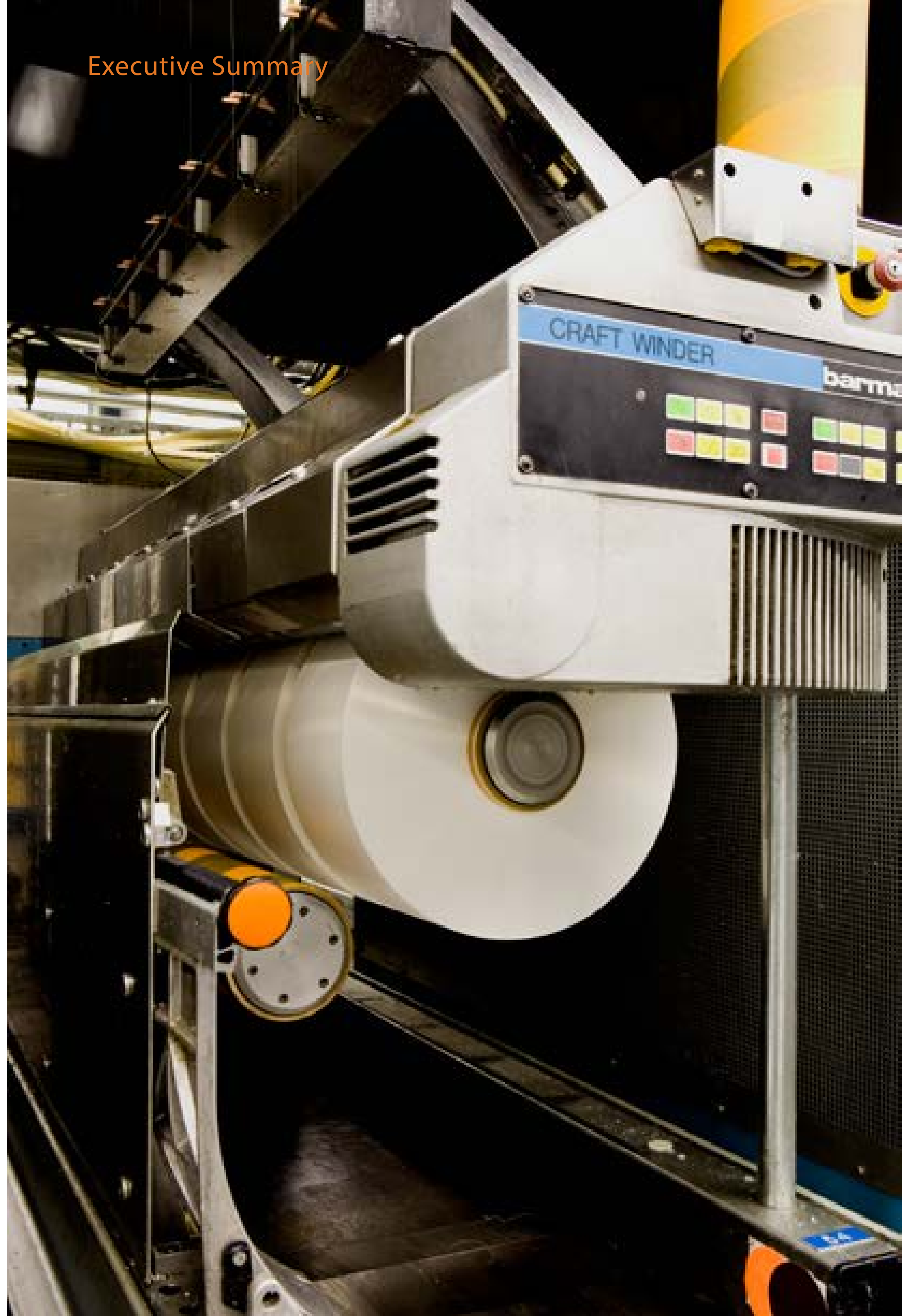

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Our 2014 Call to Action:

How we get our information and what we know as a result has changed our behavior. News on the Internet is available 24/7 to a global audience. Activists groups use the Internet's power to publicize textile supply chain issues and then leverage the publicity to encourage brands and retailers to sign up for change. Competing news challenges us to improve multiple segments of the textile supply chain including: water, waste, chemical management, raw materials, animal welfare and even which certification to use. At Textile Exchange we believe that it's time to embrace the entire supply chain. We are challenging our members and the supply chain to think holistically about our products and their effects.

A Call to Action is defined as "an action you want people to take next". Here's our 2014 Call to Action:

Create Your Own Story …… did you create a preferred fiber strategy based on company needs and beliefs last year? It's time to take the next step through chain of custody certificates and other certifications that will allow for a transparent conversation with your consumers. Know which issues are important to your company and support them from fiber through finished garment.

(Eco)systems thinking ……… is the way to make meaningful change. What are the effects of your fibers, fabrics, transportation, manufacturing and retailing of your products? We need to think about all steps. Creating partnerships throughout the supply chain is an important way for us to be engaged and to create healthy systems from land to the end of product life.

What is your Big Hairy Audacious Goal (BHAG)?......... "If your life's work can be done in a lifetime you're not thinking big enough," according to Wes Jackson. We have to think big! We need companies and individuals to commit to a BHAG. Once committed we will find the way.

Contact Us:
Email: Info@TextileExchange.org
www.TextileExchange.org

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