Produced by:

2025 Sustainable Cotton Challenge Second Annual Report 2020





Foreword from La Rhea Pepper

Toward a more sustainable future

As we release this report, we are in the midst of discovering what the impact of the Coronavirus will be on our communities. The entire supply network is being impacted – including farmers who continue to plant and harvest with the changing of the seasons. This is an excellent opportunity to pull in sustainable and preferred fibers as we reset and restart the textile industries' powerful engine.

Now is the time to make the paradigm shift from a Price to Value-driven business model, and to convey the value of our products in a way that will give factory and farm workers a fair price.

The 2025 Sustainable Cotton Challenge continues to grow with the number of initiatives, brands and manufacturers that are engaged. And the impact? We're increasing the amount of more sustainable, organic and regenerative cotton that is entering the marketplace.

30 additional brands and retailers and 5 manufacturers are participating, and their sustainable cotton usage is up by 19 percent.

With the recent addition of the U.S. Cotton Trust Protocol, farmers in key regions have access and options to participate in a variety of solutions to address the many challenges they face.

We also see more brands proactively engage with farmer groups on the ground – be sure to check out what OCA (page 65) and REEL (page 75) are doing to link brands to farmers.

What is next? A greater focus on continuous improvement and positive impacts.

Next year's report will showcase how these initiatives are delivering on impacts. Be sure to check out the status of The Delta Project on page 11. It's an inspiring undertaking that will allow us to adopt these core key performance indicators as ways to measure the progress we are making, while we encourage each other along this journey.

I am so pleased with the direction that our leaders are taking. They are expanding programs, developing new organic projects including transitional, and building more ways to engage. You'll see some great highlights on pages 29–37, all to inspire methods of increasing positive impact.

For those of you who were with us in Vancouver for the annual conference, when we announced our 2030 Strategy: Climate+ Goal, you will understand that the 2025 Sustainable Cotton Challenge is one of the strong partnerships that is working to enable proactive innovation around new business models to support more sustainable and regenerative agriculture.

I invite you to join us and be part of the solution.

Sustainable, Organic and Regenerative Cotton is contributing to mitigating the climate crisis and provides positive impacts in cotton-growing communities.

La Rhea Pepper,
 Managing Director, Textile Exchange

Cover image: Jane Dever, Professor – Cotton Breeder, Texas A&M AgriLife Research - Lubbock. Photo by Mark Arnold, Senior Research Associate (retired), Texas A&M AgriLife Research

Time for action

We've proven a pathway to scale better cotton, now adopted by many of the world's largest brands. We enthusiastically encourage others to join the journey.

Set a target

Commit to transitioning your cotton usage to sustainable sources such as organic, BCI, Fairtrade and others featured in this report. Set quantitative, time-bound targets to help track progress.

Secure your supply

Start by mapping your suppliers, using chain of custody to make a content claim, and going beyond certification to ensure impact.

Invest in transitional cotton

Looking for innovative ways to do great things? Invest in cotton in transition-to-organic cotton blended with your certified organic cotton.

Diversify your sourcing

Consider a diverse approach to building your organic supply base; different regions offer different opportunities.

Join a Round Table or Working Group

Pre-competitive, peer-to-peer and group exchanges through Textile Exchange's convening platforms is the best way to transform the industry.

Do business differently

Look at your business model. Can you adopt natural based accounting practices? How do you re-engineer your sourcing practices? OCA, ChetCo and OrganiMark's "cluster" programs each help brands and suppliers leverage scale they create together.

Start your journey with the <u>CottonUP Guide</u>.

How is COVID-19 Impacting Farmers?

The 2025 Signature Brands are the Leaders in driving real and meaningful change.

The impact of COVID-19 is yet to be determined. However, we know that the effect will be far-reaching across all sectors and communities. Some of the most vulnerable are our farmers and the communities in which they live; many are without access to clean water, much less health care.

The turn of the seasons goes on – regardless of what is going on in the rest of the world. In the southern hemisphere, cotton harvest is underway, and in the north, soils warm and the world's cotton farmers are making decisions for what crops to plant. Cotton, as well as other crops are facing the influence of a buildup in stocks and continued downward price pressure.

The International Cotton Advisory Council's (ICAC) May 2020 report states that cotton prices are \$.71 for 2019/2020 year end and \$.56 for 2020/2021. This is the lowest that cotton prices have been in over 12 years. The ICAC May 2020 report also highlights that "Cotton will suffer a 12 percent decline in consumption due to the COVID-19 pandemic." ¹

(1) ICAC- Cotton: May 2020 edition of "Cotton This Month"

"Overstocked" is the theme for the entire supply network, with the final domino falling on some of the most vulnerable people. There have been a lot of conversations about the impact that this pandemic is having in the textile manufacturing supply network. Let's not fail to link everything back to the source. We need to build solutions to support farmers as we plan for short- and long-term recovery. As we turn on the economic engine, let's do it in a way that supports the most sustainable, regenerative and organic supply and production systems. This is our opportunity to push the reset button. Knowledge is power, action is change.

 – La Rhea Pepper, Managing Director, Textile Exchange

What can we do?

"CottonConnect feels a deep responsibility to the cotton farming communities we work in. In April 2020 we launched the campaign 'Sustainable Lives: Mission Hope,' which is currently focused on COVID-19 awareness and response, providing accurate information and distributing essential supplies. We are working with our farmers, through remote systems as much as possible, on ways to increase their farms' resilience, specifically through building shock-resistance and diversified forms of incomes. We encourage brands, supply chains and the wider sector to come together and leverage each other's support, while at the same time, helping the marginalized cotton farming community overcome the crisis."

 Amol Mishra, Global Commercial Director, CottonConnect

"In partnership with Higg Co and Boston Consulting Group (BCG), we recently launched "Weaving a Better Future," a report that highlights how sustainability in fashion is at risk in a post-crisis world and lays out a framework for a phased rebuilding that elevates the role of social and environmental commitments within business resiliency strategies. Although the future remains unknown, we hope that we're able to articulate that those companies who are integrating sustainability efforts more deeply into the business and not retreating from them are poised to come out of the crisis in a position of strength. I believe that there is much our group can do together to ensure that we are supporting the industry now and in the future."

Amina Razvi, Executive Director,
 Sustainable Apparel Coalition

"We may not know what a post-COVID-19 world will look like, but it is important that we do not falter in our efforts towards a more sustainable future for the textile industry. Despite the challenging times, we are continuing to develop the U.S. Cotton Trust Protocol. This project will inventory and validate progress U.S. cotton growers continue to make towards the U.S. 10-year sustainability goals and will help make USCTP cotton a preferred fiber choice for apparel brands and retailers."

Jesse S. Daystar,
 Chief Sustainability
 Officer, Cotton, Inc.

"Now, more than ever, the cotton and textile sector must come together to support one another and share the burden so that we can mitigate the damages and emerge on the other end of this crisis."

- Alan McClay, CEO, BCI

And check out an interview with Alan <u>here</u>, as well as Alan's new blog series on this issue <u>here</u>.



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Global Cotton Production

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Welcome to the 2019 edition of the 2025 Sustainable Cotton Challenge Report

Welcome to Textile Exchange's second annual 2025 Sustainable Cotton Challenge report.

The 2025 Sustainable Cotton Challenge inspires retailers and brands to champion the greater use of sustainable cotton by aiming for 100 percent of the cotton from their supply chains to come from the most preferred sources. These environmentally friendly sources are from the Textile Exchange list of recognized organic and sustainable cotton initiatives.

These initiatives include organic cotton certified to the Organic Content Standard (OCS) or the Global Organic Textile Standard (GOTS), Fairtrade cotton (certified to Fairtrade International or Fair Trade U.S.A.), Better Cotton Initiative (BCI), Cotton Made in Africa (CmiA), BASF e3, and recycled cotton (rCotton) certified to an independently verifiable standard such as the Global Recycled Standard (GRS) or the Recycled Claim Standard (RCS). In addition, CottonConnect's REEL program and code provides a starting point for businesses aiming for greater sustainability in their cotton supply chain. And starting with 2020 reporting, the United States Cotton Trust Protocol will also be part of the program.

In our 2019 report, we evaluate the progress of the 2025 Sustainable Cotton Challenge corporate participants and the sustainable cotton initiatives they have partnered with to make progress on their journey. We will look at their consumption data from the Textile Exchange's Corporate Fiber & Materials Benchmark Program (CFMB) as a way to track their evolution. We will also learn about the various initiatives and standards that are the framework for this work and be inspired by bite-sized stories from the organic field.

Looking at industry transformation with data

The use of data and rating tools such as the CFMB can inform decision-making and strengthen internal systems toward advancing a company's sustainability commitments. Textile Exchange's organic cotton production data collection and management processes have been independently assessed by BSD Consulting in accordance to the Global Reporting Initiative (GRI) and AA1000APS principles. This was a rewarding moment for the Textile Exchange team who worked very hard for this recognition. The same methodology is now being rolled out to other data collection processes. The accuracy of this reporting is key to keeping all brands involved on track toward these important longterm goals.

Teamwork is critical

It is essential that team members from across brand leadership and the supply chain are responsible for coordinating efforts and that accountability sits with decision-makers. Public reporting is a gateway to transparency; it demonstrates a company's strength of commitment, ensures goals are being met and milestones are reached.



Sevilla Granger Iovacchini Program and Project Strategist, Textile Exchange

About the initiatives and their work

The "heart" of the 2025 Sustainable Cotton Challenge is the Preferred Cotton initiatives and the Sustainable Cotton Matrix. Various not-for-profit groups, academic institutions and businesses have collaborated to try and provide systems, standards, transparency and traceability in these programs to assist all involved from field to fabric make decisions. Sustainable production practices and technology are constantly evolving and adaptation is critical at the farm gate. These initiatives provide education, assistance and the platforms needed to guide us all to a more sustainable cotton supply. Sorting out the nuances, attributes and differing approaches can be a daunting task. Textile Exchange has attempted to provide a snapshot of the differences and similarities between these programs. Effects on the environment, economics and social ethics are compared via the Sustainable Cotton Matrix, which we use to detail the initiatives in this report. While this snapshot is in no way "evergreen," it is our hope that this can benefit brands, retailers and consumers when trying to decide on their sustainable cotton strategy and needs.



Brent Crossland Textile Exchange Ambassador

What is the 2025 Sustainable Cotton Challenge?



History of the Challenge

His Royal Highness The Prince of Wales established the **International Sustainability Unit (ISU)** to facilitate consensus on how to resolve some of the key environmental challenges facing the world. These challenges include halting tropical deforestation, sustaining the marine environment and exploring ways to maintain ecosystem resilience while achieving development goals. The ISU was proud to have played a part in facilitating the advances that have been made, based upon its international reputation for credible, trusted and neutral convening, underpinned by well researched and rigorous analysis and broad consultation with key actors from governments, the private sector and civil society.

In 2017, the ISU, in collaboration with M&S and The Soil Association, convened some of the world's leading clothing companies together with a number of NGOs and standards organizations working on sustainable cotton. These meetings at Clarence House offered participants the opportunity to discuss the possible launch of a collaborative effort on scaling the use of sustainable cotton within the textile industry.

A small steering group, led by the ISU, Marks&Spencer, The Soil Association, Textile Exchange, Levi Strauss & Co., and Kering worked together to draft the Sustainable Cotton Communiqué. In May 2017, at a high-level meeting in London, the <u>Sustainable Cotton Communiqué</u> was launched. Thirteen of the world's most renowned clothing and textile companies, in the presence of His Royal Highness The Prince of Wales, signed up to the <u>2025 Sustainable Cotton Challenge</u>. The Prince of Wales congratulated the companies that signed and described their commitment as "a hugely encouraging step that will hopefully spur wider action across the sector and go a long way in helping to reduce the negative environmental and social impacts that are all too often associated with cotton production." The commitment made by these companies equated to more than 300,000 metric tons (mt) of cotton purchased each year. The aims of the Communiqué includes steps to increase the uptake of organic and sustainable cotton which will, in turn, increase the income of smallholder farmers, eliminate highly hazardous pesticides, eliminate or reduce the amount of pesticides and synthetic fertilizer used, reduce water use and improve water quality and soil health, including positive carbon impacts as a result of more sustainable practices.

What are the Criteria for an Initiative to be a part of the 2025 Sustainable Cotton Challenge?

All initiatives that qualify for the Challenge have clear guidelines, or standards of better or best practices. Farmers need to be specifically enrolled in the program as a longterm objective. They are then monitored by a second party or third party certified.

The 2025 Sustainable Cotton Challenge is a catalyst to shift the market toward the use of more sustainable cotton. Through this challenge, these companies are ensuring that 100 percent of the cotton they use comes from sustainable sources by 2025. The progress made on sustainable cotton reveals how entire commodity sectors can make rapid progress toward sustainable outcomes, so long as the business case is clear that solutions can be found and senior level leadership is behind the process of change.



Photo Credit: HRH Prince of Wales International Sustainability Unit

How to Participate

This Challenge is a catalyst to spur a shift in the market toward the use of more sustainable cotton. As stated in the original Communiqué, companies will be required to independently publish their progress from 2018 which will be collected by Textile Exchange.

There is no cost to join and no requirement to be a member of Textile Exchange. Brands are asked to participate in either Textile Exchange's Preferred Fiber and Materials Benchmark program or the Consumption Tracker so we can document their collective progress.

All results are reported as aggregated data and no information is disclosed from specific brand reporting; information submitted is absolutely secure. Any inspirational stories that brands and initiatives provide in addition are purely voluntary. If your company is interested in signing up for the 2025 Sustainable Cotton Challenge, please fill out the pledge at the bottom of the webpage at the link below. More information, including the full text of the Sustainable Cotton Communiqué, is available on the Textile Exchange website:

textileexchange.org/2025-sustainablecotton-challenge

If you have any questions, please contact us at:

Cotton2025@TextileExchange.org

Project Leadership

In March 2018, with the close of His Royal Highness The Prince of Wales International Sustainability Unit, it was agreed that Textile Exchange would assume the role of the initiative's Secretariat. Textile Exchange is thrilled to have this honor. Under the guidance of the Steering Committee, we will continue to build on the momentum created through this initiative, enrolling more brands to the Communiqué and helping to secure a more sustainable cotton sector.



A very special thank you to our dedicated Steering Committee:

> Sarah Compson The Soil Association

> > Alan McClay BCl

La Rhea Pepper Textile Exchange

Liza Schillo Levi Strauss & Co.

Phil Townsend Marks & Spencer

The resiliency of our long-term sourcing strategies starts on the farm. As the climate changes and we experience disruptions like COVID-19, we need to sustain the momentum of market share growth of preferred cotton to actively manage risk, enable end-to-end visibility and deliver value to investors, consumers, employees and the planet."



Cara Smyth

Gabelli Business School Fellow Founder, Sustainable Business Coalition, Fordham University

Partners in the Evolution to Preferred Cotton



There are a number of other projects supporting the transition toward preferred cotton. Collaboration and information are key for a successful uptake of preferred cotton.

Textile Exchange's Organic Cotton Round Table (OCRT) held the first Regional OCRT in China, March 2019, with collaboration from CottonConnect. In September 2018, the first Regional OCRT for West Africa was organized in Koudougou, Burkina Faso in collaboration with Catholic Relief Services (CRS), USDA and SICOT. Further round tables have been held in Izmir focusing on Turkey, Egypt and Central Asia as well as the Global OCRT held during the Textile Exchange Conference each year.

The Laudes Foundation, in partnership with the Brazilian NGO ESPLAR and World-Transforming Technologies (WTT) launched the program "Meaningful Innovation for Family Farming -Sustainable Cotton Challenge" at the end of 2018. The goal is to support simple innovations that can help smallholder organic cotton farmers to increase their overall productivity and living standards.

The <u>Chetna Coalition</u> (ChetCo) was formed in 2013 with a shared vision to pilot a novel and highly collaborative sourcing model for ethical fashion. In 2019, the coalition published its first Chetna Coalition Brand Impact Report.

Cotton 2040, initiated by Forum for

the Future, launched CottonUp, a new "Guide to Sourcing Sustainable Cotton" in June 2018. This guide provides practical information and resources to either start sourcing sustainable cotton or increase volumes.

<u>CottonConnect</u> is an enterprise with a clear mission to transform the cotton industry for good. In August 2019, Primark announced the expansion of its collaboration with CottonConnect to train 160,000 cotton farmers in more environmentally friendly farming methods by 2023.

Organic Cotton Accelerator (OCA) is the only multi-stakeholder organization fully dedicated to organic cotton. As a global platform, we're committed to bringing integrity, supply security and measurable social and environmental impact to organic cotton. OCA participated in the Organic Cotton Traceability Pilot; a joint effort between OCA, Fashion for Good and Laudes Foundation with support from C&A, Kering, PVH Corp., Zalando SE and Pratibha Syntex with Bext360 as the leading technical partner.

The Organic Trade Association

announced the official launching of its Organic Fraud Prevention Solutions program in March 2019 to help companies minimize or eliminate fraud in organic certification both inside and outside of the United States. The <u>Partnership for Sustainable Textiles</u> in Germany launched the "Organic Cotton Sourcing Guide" in January 2019 in collaboration with C&A Foundation, Organic Cotton Accelerator and Helvetas.

Delta Project The aim of this 3-year project (2019 to 2021) is to develop a joint sustainability measurement and reporting framework for different agricultural commodities focusing on cotton and coffee. It is a collaboration between BCI, ICAC-SEEP, the International Cotton Organization and the Global Coffee Platform. The Delta Project is funded by the ISEAL Innovations Fund.

Soil Health Institute (SHI), a US based non-profit organization, announced in March 2019 that it will launch "Healthy Soils for Sustainable Cotton," a continuous engagement project to help USA cotton farmers increase their soil health. The initial pilot program, conducted during 2019, started in two American states and will expand to another three states in 2020.

Solidaridad, Cotton made in Africa, Danish Ethical Trading Initiative and MVO Nederland launched the new project <u>Bottom UP</u> in June 2019 to promote a sustainable cotton and garment value chain, from Ethiopian cotton to European consumers.

UNIDO, the United Nations Industrial Development Organization, launched a

multi-stakeholder pilot project in Egypt in February 2019, to train cotton farmers on the Better Cotton Initiative's approach to sustainable cotton production. UNIDO is also supporting organic cotton production in Egypt through the project <u>CottonForLife</u>, a private sector initiative of FILMAR.

The <u>U.S. Cotton Trust Protocol</u>, a data collection, measurement and verification procedure, was introduced by the Cotton Council in November 2019. It will document USA cotton production practices and its environmental impact. The Cotton Council aims to benchmark the cotton growers' results against its 2025 sustainability goals.

West Africa Organic & Fairtrade Cotton

<u>Coalition</u> was launched at the International Cotton and Textile Conference (SICOT) in Koudougou, Burkina Faso in September 2018. This coalition aims to establish reliable market access for tens of thousands of smallholder farmer families in West Africa who are producing organic Fair Trade cotton and other organic crops.

Please see also Textile Exchange's <u>Organic</u> <u>Cotton Market Report 2019</u> for more information.

Our Vision for the Future of Cotton

The goal is to develop and support thriving rural communities where soils will be healthy, biodiversity is flourishing, and people have both food security and economic stability. Responsibly grown cotton using regenerative practices will be core to delivering on this vision.



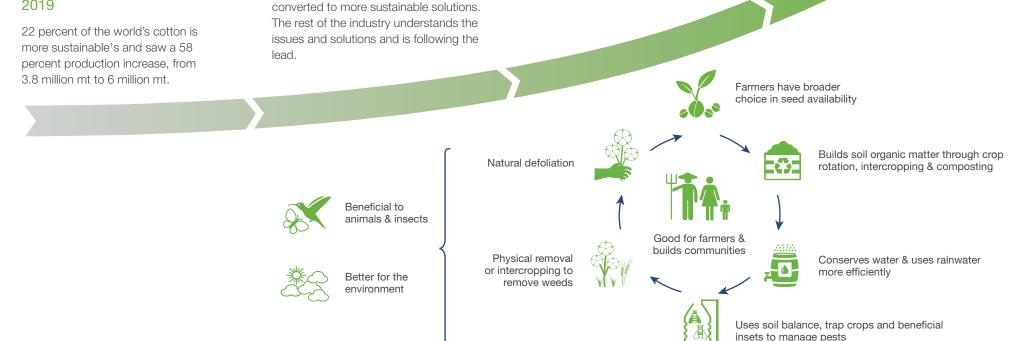
Vision for 2040 and beyond

The cotton industry has changed dramatically: it prioritizes sustainable practices, is highly transparent and traceable and provides viable livelihoods for farming communities.

Vision for 2025

Over 50 percent cotton volume has been

2019



Vision for 2030

resilient communities.

The United Nations Sustainable

Development Goals Textile Sector Report communicates significant impacts around water use and quality, biodiversity, food security and case studies supporting the

journey to regenerative agriculture and

(1) ICAC- Cotton: World Statistics 2019 and Textile Exchange compilation of total global fiber volume data (see "Global Fiber Market")

Diagram: Textile Exchange / AboutOrganicCotton.org

Cotton 2040

Creating a Resilient Cotton Industry in Turbulent Times

The cotton system requires systemic, radical change if it is to thrive and contribute positively to the environmental, social and economic challenges that society is facing in an increasingly disrupted world. This level of change can only be achieved by actors across the supply chain taking a collaborative approach to addressing key systemic challenges to the long-term sustainability of the cotton industry.

Cotton 2040 is a platform which brings together leading international brands and retailers, sustainable cotton standards, and other stakeholders across the value chain to accelerate progress and maximize the impact of existing sustainable cotton initiatives. Convened by international sustainability non-profit Forum for the Future and supported by Laudes Foundation, it seeks to align and accelerate action on critical issues, from increasing uptake of sustainable cotton by brands and retailers, to addressing a wider range of complex, systemic challenges.

We envisage a sustainable global cotton industry:

- Which is resilient in a changing climate.
- Which uses business models that support sustainable production and livelihoods.
- Where sustainably produced cotton is the norm.

The initiative's progress to date includes building the CottonUP Guide to sourcing sustainable cotton, creating the first platform providing comprehensive information on sourcing cotton across multiple sustainable standards. We've also been carrying out foundational work with sustainable cotton standards, programs and codes on pathways toward greater alignment in traceability and impact reporting (the latest phase of this work has been carried out in collaboration with Project Delta). As we enter the critical decade for action on the SDGs, Cotton 2040 is now embarking on an exciting, ambitious next phase of work to continue to drive transformational change in the cotton industry.

Over the next three years, Cotton 2040 and its partners will deliver a set of three interconnected workstreams with the biggest potential to drive a systemic shift to mainstream sustainable cotton through collaborative efforts.

- Planning for adaptation: Creating sector-wide collaborative action to understand and adapt to the changing climate.
- Sourcing sustainable cotton: Driving the uptake of sustainable cotton with brands and retailers, building on the success of the <u>CottonUP Guide</u> launched in 2018.
- Developing sustainable business models: Supporting a widespread shift toward alternative business models which ensure fairer distribution of value and risk between stakeholders, and enable the regeneration of land and resources.

We are now inviting expressions of interest and commitment from organizations wishing to contribute to one or more of these workstreams in 2020 and beyond.



Cotton 2040's progress has been guided by a steering group that included sustainable cotton standards, programs and codes (organic, represented by Textile Exchange; The Better Cotton Initiative (BCI); CottonConnect; Cotton Made in Africa (CMiA); Fairtrade; *my*BMP (Cotton Australia); and the Organic Cotton Accelerator (OCA). Brand and retail partners have included Marks & Spencer, Target, Aditya Birla Fashion and Retail Ltd. and Burberry, among others, alongside industry partners such as IDH, ICAC and more.

In this next phase, we will continue to expand existing relationships and engage a broader cross industry network to enable system wide dialogue and action.

Find out more at <u>Forum for the Future</u>, or contact <u>Charlene Collison</u>, Associate Director – Sustainable Value Chains & Livelihoods at Forum for the Future for more information.

Delta Sustainability Framework



Bridging the Gap of Measuring Sustainability Performance

The <u>Delta Project</u> is a joint effort of the Better Cotton Initiative (BCI), the Global Coffee Platform (GCP), the International Coffee Organization (ICO) and the International Cotton Advisory Committee (ICAC). It aims to develop a Common Sustainability Framework to align sustainability monitoring and reporting in cotton and coffee to the Sustainable Development Goals (SDGs). This project was possible thanks to a grant from the ISEAL Innovations Fund, which is supported by the Swiss State Secretariat for Economic Affairs SECO.

The Delta Sustainability Framework is voluntary and intended to apply worldwide to any cotton and coffee farming system, with the potential to be expanded to other agricultural commodities over time. It builds on the work already undertaken by several commodity platforms and initiatives to define and harmonize sector-wide sustainability measurement, in particular on the <u>Coffee Data Standard</u> and on the SEEP Guidance Framework on Measuring Sustainability in Cotton Farming Systems¹. It includes a common set of 15 impact and outcome indicators across the environmental, economic and social pillars and detailed methodological guidance to gather information on each indicator. The current version of the indicator set was developed through an intensive consultation process commencing in June 2019 with over 25 organizations including the Cotton 2040 Impacts Alignment Working Group members, comprising major cotton sustainability standards, programs and codes², as well as retailers, donors, research institutes, national committees and international agricultural organizations.

The Delta Project will soon begin pilot testing of the indicators in Vietnam for coffee and in South Africa for cotton, among others. Independent expert groups have already agreed to assist with the preparation of international common data protocols on specific indicators (e.g. soil carbon content, gender index, highly hazardous pesticides and carbon footprint) and to provide on-theground guidance during data collection.



Some of the framework's intended uses include supporting national reporting on the commitments set by the SDGs; assisting brands and retailers to track the impact of their sustainable commodity sourcing decisions; upgrading farmer services to support continuous improvement at farm level and increasing transparency and communication with consumers on the actual value of sustainably produced goods. Photo Credit: Textile Exchange

The final framework, including reporting guidance, will be available in 2021 after the pilot testing. The set of indicators to be pilot tested in 2020 is accessible at www.deltaframework.org.

For more information, contact Eliane Augareils, Delta Project Manager

(1) SEEP is an expert panel of the International Cotton Advisory Committee (ICAC) established in 2006.

(2) The Cotton 2040 Impacts Alignment Workstream (supported by Laudes Foundation) and The Delta Project are working closely together to drive alignment of sustainability impact indicators and metrics for cotton farming systems.

Terminology: "Sustainable" and "Preferred" Cotton



There are many terms used to describe approaches that aim to transition away from conventionally grown cotton to more sustainable techniques.

The title of this challenge, as coined at its inception by the International Sustainability Unit, uses the term "sustainable cotton." Textile Exchange has a preference for using the term "preferred cotton" in its work, and this latter term is, therefore, used in parts of this report that refer to other work initiated by Textile Exchange, such as the Corporate Fiber and Material Benchmark. You can read Textile Exchange's definition of "preferred" fiber or material on the right.

However, despite differences in the terminology used, the partners and signatories of the 2025 Sustainable Cotton Challenge share the same vision and ambitions for the sector as Textile Exchange. We are aligned on the mission to transform the cotton sector based on a portfolio approach, committed to continuous improvement and to achieving a positive impact.

The most important thing is to encourage the movement from programs that do "less harm" to programs that are building, strengthening and implementing regenerative practices.

How Textile Exchange determines a Preferred Fiber or Material

Textile Exchange define a preferred fiber or material as one which results in improved environmental and/or social sustainability outcomes and impacts in comparison to conventional production. An assessment framework is under development.

Ways to recognize or achieve a preferred status include all or a combination of the following:



The fiber or material has sustainability criteria
 developed through a formalized multi-stakeholder process.

The fiber or material has a recognized industry standard in place which confirms its status as preferred.



There is a robust chain of custody system in place to track or trace the fiber or material through the supply chain and back to its origin.

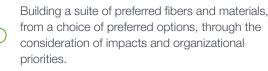
The fiber or material has been objectively tested or verified as having greater sustainability attributes, such as through a peer reviewed Life Cycle Assessment.



The fiber or material has a good potential for circularity.

Taking a Portfolio Approach

A portfolio approach involves:





Embedding a strategy that leads to preferred options replacing unsustainable or less sustainable options.



A commitment to the principles of continuous improvement and ensuring options selected result in a positive impact.

Provided the above approach is taken, Textile Exchange recognizes that "one size does not fit all" and that a company will build its own portfolio based on the preferred fibers and/or materials their company is implementing.

Understanding Regenerative



The term "regenerative" is increasingly a feature of conversations about sustainable or preferred fiber choices, and you'll see it frequently featured in this report. To get to the heart of the matter, we need to understand the difference between **Regenerative Practices** and **Regenerative Agriculture**. When utilizing **Regenerative Agriculture** in cotton and cultivated production systems, farmers use a holistic approach.

Regenerative Practices usually address a single element or set of practices within the system. Regenerative agriculture is a holistic philosophy that aims at positively influencing biosequestration, biodiversity, ecotoxicity, climate resilience, water systems, micronutrients, and ecosystem services. Standard practices include no or low till plowing, cover cropping, multi-use systems, agroforestry, rotational farming, precision agriculture, integrated pest management, and intentional use of inputs that are landscape specific. Regenerative agriculture is not a "one size fits all" prescriptive practice, instead it looks at the combination of methods that support resilience as well as build and nourish our ecosystem. Over time, regenerative practices can increase production and naturally reduce the need for external inputs. When these regenerative practices are implemented successfully, the health of the agriculture ecosystem and farmer economic stability can be improved. This is regenerative agriculture.

Keeping the concept of regeneration and continuous improvement at the forefront of cotton production systems is essential to address the key challenges we need to tackle over the next ten years, and which this Challenge was initiated to spearhead.

For a deeper dive on regenerative, see pages 77–78.



Photo Credit: Textile Exchange

Where to Find Sustainable Cotton Across the Globe



CENTRAL ASIA

BCI: 18,000 mt

Organic: 8,999 mt

Fairtrade: 361 mt

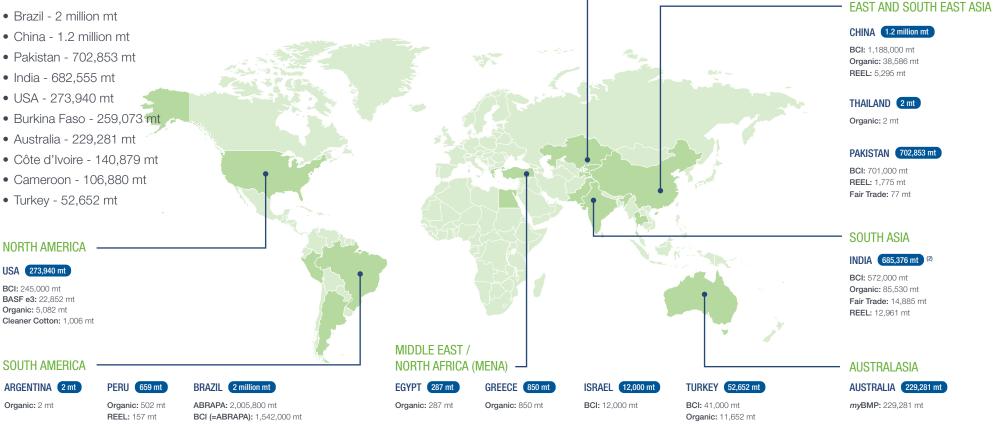
TAJIKISTAN (27,360 mt)⁽²⁾

Sustainable cotton was grown in 30 countries in 2017/18. More than 95 percent of all preferred cotton was grown in ten countries: Brazil, China, Pakistan, India, USA, Australia, Côte d'Ivoire, Cameroon, Burkina Faso and Turkey. A closer look at Sub-Saharan Africa is provided on the next page.

TOP 10 COUNTRIES

by volume of preferred cotton, together producing >95 percent of all preferred cotton:

- Brazil 2 million mt
- Pakistan 702.853 mt
- India 682.555 mt
- USA 273.940 mt
- Burkina Faso 259.073 mt
- Australia 229,281 mt
- Côte d'Ivoire 140.879 mt
- Cameroon 106,880 mt
- Turkey 52,652 mt



KAZAKHSTAN 1,000 mt

BCI: 1,000 mt

KYRGYZSTAN 22,682 mt

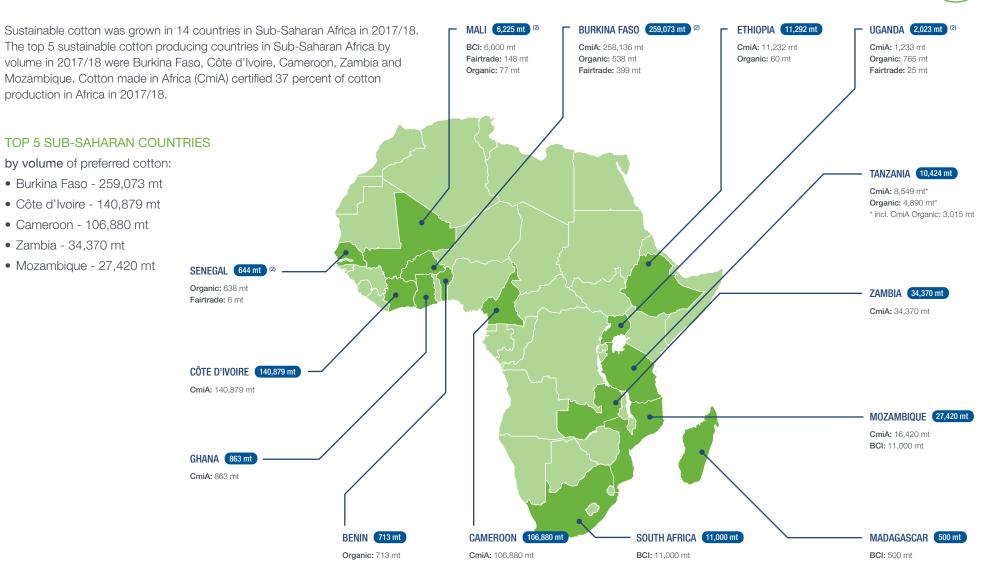
Organic: 22,309 mt

Fairtrade: 373 mt

(1) Email correspondence with cotton initiatives.

(2) As the per country breakdown of Fairtrade Organic cotton was not available to the report production team at the launch of the report, this figure may include cotton that is certified to both Fairtrade and organic and thus a doublecounting of this figure is possible. The total volume of preferred cotton per country would not change much though, as the share of Fairtrade Organic cotton compared to the total amount of preferred cotton is rather low.

Spotlight on Sub-Saharan Africa



(1) email correspondence with cotton initiatives.

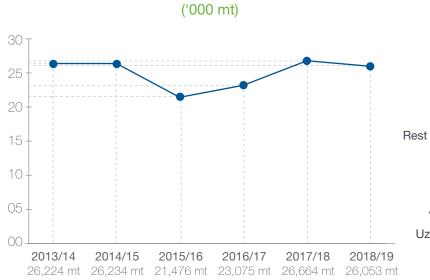
(2) As the per country breakdown of Fairtrade Organic cotton was not available to the report production team at the launch of the report, this figure may include cotton that is certified to both, Fairtrade and organic, and thus a doublecounting of this figure is possible. The total volume of preferred cotton per country would not change much though, as the share of Fairtrade Organic cotton compared to the total amount of preferred cotton is rather low.



Global Cotton Production

Global Cotton Production

Cotton is the second highest volume fiber since synthetics took the lead in the mid-1990s. Cotton production took a dip in 2015/16 recovering in 2017/18 with around 26.66 million mt and a market share of approximately 24.5 percent of global fiber production. Production of cotton is expected to be approximately 26,053 million mt in 2018/19.



Global Cotton Production Trend

(million mt) India 6.4 China 5.9 USA 4.5 Rest of World 3.4 Brazil 2 Pakistan 1.8 Australia 1.1 Uzbekistan 0.8 Turkey 0.8

Global Cotton Production

Breakdown 2017/18

Cotton is grown in around 64 countries on approximately 33 million hectares = 2 percent of global arable land.

> The average cotton fiber yield is **778 kg/ha**. Yields range from **130–2088 kg/ha**.

Total global cotton fiber production was **26.66 million mt** in 2017/18.

Cotton farms range from highly industrialized in more developed economies, to small scale family farmers in the developing southern hemisphere.

- ICAC - World Cotton World Statistics April 2019.

- Textile Exchange Preferred Fiber and Materials Report 2018.

- Note that 2017/18 data is given as percent of 2017 calendar year data total fiber production as this is the common way of allocation by key industry reports.

Global Preferred Cotton Production

From a niche to a market share of 22 percent in 2017/18, preferred cotton is gaining ground.

With a production of around 26.7 million mt in 2017/18. cotton had a share of around 24.3 percent of the total fiber market¹.

The market share of preferred virgin cotton increased from five percent of the total cotton production in 2012/13 to 22 percent in 2017/18. This equals an increase in global production volume of preferred cotton from 1.4 million mt in 2012/13 to 6 million mt in 2017/18². And even more impressive is the increase in the last year, when we have seen a 58 percent production increase, from 3.8 million mt to 6 million mt.

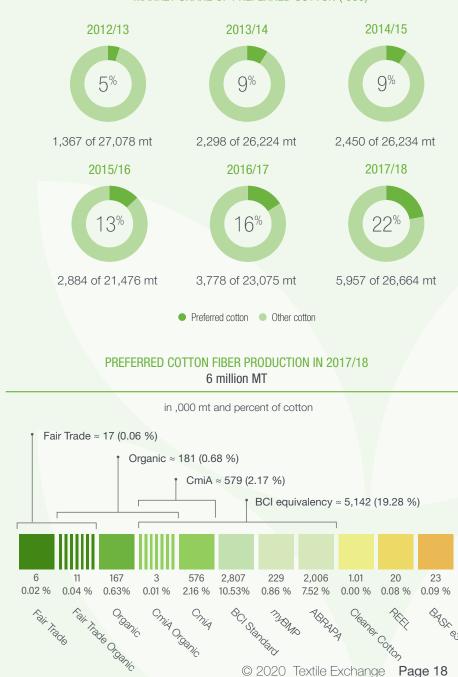
The preferred cotton figures reported here include ABRAPA, BASF e3, Better Cotton Initiative (BCI), Cleaner Cotton, Cotton made in Africa (CmiA), Fairtrade, Fairtrade Organic, Field to Market, ISCC, myBMP, Organic, REEL Cotton, Regenerative Cotton and Transitional Cotton, Field to Market and Regenerative Organic Certification

(ROC) cotton production in 2017/18 was still zero and figures for Transitional Cotton were not available in 2017/18. The preferred cotton options included here align with all virgin cotton options included in the 2025 Sustainable Cotton Challenge³.

All BCI cotton, including its equivalents ABRAPA, CmiA and *my*BMP, made up around 19 percent of all cotton in 2017/18 and thus the large majority of the 22 percent of preferred cotton in 2017/18. The BCI Standard, without equivalents, accounted for 10.53 percent, the Brazilian standard ABRAPA for 7.52 percent, CmiA for 2.17 percent, and mvBMP for 0.86 percent of all cotton in 2017/18. BCI aims to increase its market share to 30 percent of the global cotton production by 2020.

All other cotton programs together, including BASF e3, Cleaner Cotton, Fair Trade, ISCC, organic⁽⁴⁾ and REEL cotton, had a combined market share of 3 percent of all cotton in 2017/18.

General note: Methodological changes and comparison to previous years Textile Exchange continuously improves its data collection methodology. Some data reported in previous years has been revised or updated since the actual data has become available for initial estimates or the methodology has been improved. A simple comparison between previously reported numbers and data reported in this year does not show the actual change over time but is caused by one of the reasons mentioned above. For specific adjustments, please refer to the Textile Exchange Preferred Fiber and Materials Market Report 2020.



MOND

© 2020 Textile Exchange

Sleaner Cotton

109

0.41 %

97

Page 18

MARKET SHARE OF PREFERRED COTTON ('000)

⁽¹⁾ ICAC- Cotton: World Statistics 2019 and Textile Exchange compilation of total global fiber volume data (see "Global Fiber Market"). (2) ICAC-Cotton: World Statistics 2019, standard owner data received by mail or from their publications; compilation by Textile Exchange overlaps of standards excluded.

^{(3) (1)} These figures do not include recycled cotton. Please see the chapter "Recycled Cotton" for more information on recycled cotton. (4) This includes organic cotton certified to bioRe.

The production volume of preferred cotton is growing (in '000 metric tons).

A Closer Look at Preferred Cottons

ABRAPA cotton production increased from 753,608 mt in 2012/13 to approximately 2 million mt in 2017/18. This equaled a market share of 7.52 percent of all cotton grown in 2017/18. An estimated 75 percent of all ABRAPA cotton was accounted for as BCI in 2017/18.

The **BASF e3** cotton production was approximately 22,852 mt in 2017/18. This equaled 0.09 percent of all cotton produced in 2017/18.

Better Cotton Initiative (BCI) cotton production including equivalents increased from 665,789 mt in 2012/13 to 5.142 million mt in 2017/18. The BCI Standard made up 54.59 percent of all BCI cotton produced in 2017/18. The remaining 45.41 percent of BCI cotton was produced according to the BCI equivalents ABRAPA, Cotton made in Africa and *my*BMP. BCI including equivalents represented 19 percent of all cotton production in 2017/18. **Cleaner Cotton** production increased from 258 mt in 2012/13 to 1,006 mt in 2017/18. This equaled 0.004 percent of all cotton produced in 2017/18.

Cotton made in Africa (CmiA)

production increased from 144,909 mt in 2012/13 to 578,562 mt in 2017/18. This equaled 2.17 percent of all cotton produced in 2017/18 and equaled approximately 37 percent of all cotton production in Africa in 2017/18. Almost all (97 percent) of the CmiA produced in 2017/18 was also accounted for as BCI equivalent.

Fair Trade cotton production reached 16,906 mt in 2017/18. This equaled 0.06 percent of all cotton produced in 2017/18.

Fairtrade Organic cotton production was approximately 11,000 mt in 2017/18. 65 percent of all Fairtrade cotton in 2017/18 was also certified to an organic standard.

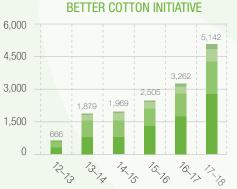
Tip: How to find out more about the different cotton programs.

Check out the Textile Exchange <u>Sustainable Cotton Matrix</u> to learn more about the specific programs and what they cover.

(1) The data are based on information from the standard owners which we have received through email correspondence or from their websites. The production volumes reported here include the total volume produced per standard including equivalents and overlaps with other standards.

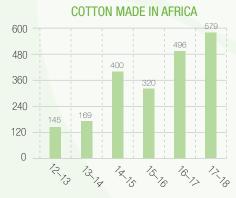






BCI Standard BCI eq. ABRAPA
BCI eq. CmiA/SCS BCI eq. myBMP







Fair Trade Organic
 Fair Trade

© 2020 Textile Exchange Page 19

A Closer Look at Preferred Cottons

Field to Market certified cotton was not yet produced in 2017/18.

ISCC cotton production was 108,575 mt in 2017/18. This equaled 0.41 percent of all cotton produced in 2017/18.

*my*BMP cotton production increased from 54,000 mt in 2013/14 to 229,281 mt in 2017/18. This equaled 0.86 percent of all cotton produced in 2017/18. *my*BMP is also accounted as BCI equivalent.

Organic cotton production increased from 107,243 mt in 2012/13 to 180,871 mt in 2017/18. This equaled a market share of 0.68 percent of all cotton produced in 2017/18. The organic cotton production volume includes the organic cotton that is certified according to bioRe. For more information on organic cotton please see our <u>Organic</u> <u>Cotton Market Report 2019</u>. **REEL cotton** production has fluctuated over the past few years with 20,000 mt grown in 2017/18. This equaled 0.8 percent of all cotton produced in 2017/18.

Regenerative Cotton certified according to the Regenerative Organic Certification (ROC) was not yet produced in 2017/18.

Transitional Cotton is the cotton-inconversion to organic. 44,394 ha of land were in-transition land in 2017/18. For more details, please reference the Organic Cotton Market Report.

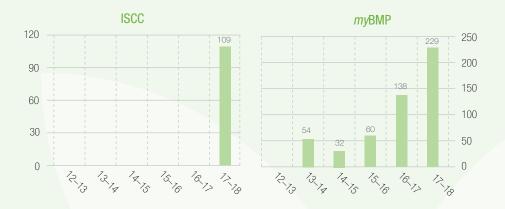
U.S. Cotton Trust Protocol certified cotton was not yet produced in 2017/18.

Tip: How to find out more about the different cotton programs.

Check out the Textile Exchange <u>Sustainable Cotton Matrix</u> to learn more about the specific programs and what they cover.

(1) The data are based on information from the standard owners which we have received through email correspondence or from their websites. The production volumes reported here include the total volume produced per standard including equivalents and overlaps with other standards.

The production volume of preferred cotton is growing (in '000 metric tons).





Perspective on Brand Participants

2025 Sustainable Cotton Challenge Current Participants 2018-19

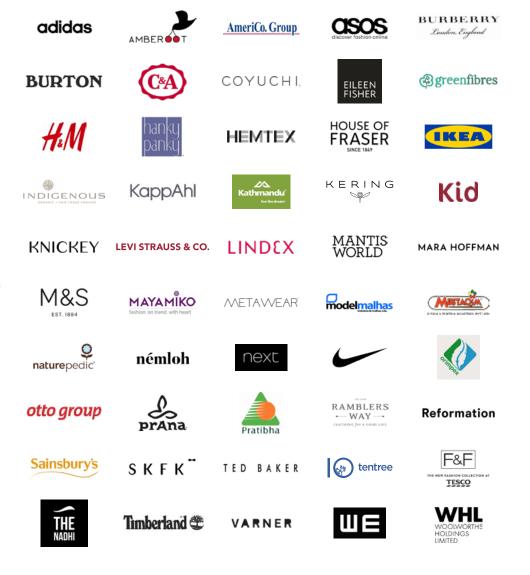
In the 2018-19 cohort of the 2025 Sustainable Cotton Challenge, 82 participating companies including subsidiaries championed the greater use of sustainable cotton by aiming for 100 percent of the cotton from their supply chains to come from the most sustainable sources.

These companies are placing sustainable cotton at the core of their businesses. There is a strategy in place and policies have been set to address key sustainability issues in the sourcing of fiber and materials. Setting the goal of 100 percent sustainably sourced cotton by 2025 helps these companies stay focused, and the use of measuring tools such as the Textile Exchange Corporate Fiber & Materials Benchmark Program (CFMB) can inform decision-making and strengthen internal systems.

2025 Sustainable Cotton Challenge Signatories are a mix of brands, retailers and holding companies, with a combined estimated turnover of USD 305 billion. Signatory companies are head quartered across 12 different countries. Textile Exchange tracks signatories' progress through the <u>Corporate Fiber</u> and <u>Materials (CFMB) Benchmark</u> <u>Program</u>, where participants are required to report data through an online portal called "Probench." In 2019, 73 of the 82 signatories reported data this way, either independently or through a combined submission made by their holding company, resulting in 40 completed survey submissions representing the 73 signatories.

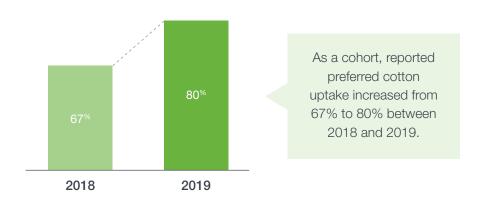
From the 40 submissions, 31 completed the full "cotton module" i.e. they reported on both management as well as uptake activities, and the remaining 9 reported on uptake (consumption data) only through the "progress tracker."

The majority (39 of the 40 participants) were able to provide uptake figures, which approximated a combined one million metric tons (mt) of preferred cotton and represented 80% of their entire cotton use (including conventional). This figure represented 3.8 percent of global cotton produced in the same year.



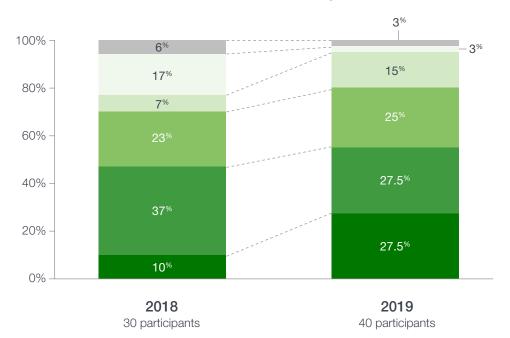
The Big News

We are very pleased to announce that in the last year, participants in the 2025 Sustainable Cotton Challenge (2025 SCC) grew from 30 companies to 40. This expanded group of participants increased their reported preferred cotton uptake from 67 percent to 80 percent of their total cotton use. If we look specifically at the companies reporting uptake data in both 2018 and 2019, we see a 19 percent increase in year-onyear preferred cotton uptake.





Aim: 100% sustainable cotton by 2025



Participants that have achieved:

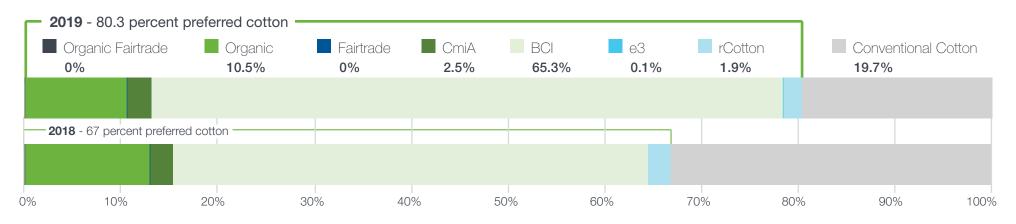
- ...their target of 100% preferred cotton.
- ...a preferred cotton share of between 75-99%.
- ...a preferred cotton share of between 50-74%.
- ...a preferred cotton share of between 25-49%.
- ...a preferred cotton share of less than 24%.
- Participants that are not tracking or reporting preferred cotton uptake.

2025 Participants are Closing The Gap



The reported use of preferred versus conventional cotton by the 2025 Sustainable Cotton Challenge participants:

In 2019, based on the absolute volume of preferred cotton reported, the overall mix of preferred to conventional was: 80 percent preferred and 20 percent conventional:



Sub-Sector Analysis

Multi-Sector	(8 participants) - 81.1 percent preferre	d cotton			
Home/Hospit	ality (5 participants) - 98.5 percent pr	eferred cotton			
Outdoor/Spo	rts (6 participants) - 81.3 percent pre	erred cotton			
Apparel/Foot	twear (20 participants) - 69.1 percent	preferred cotton			
0%	20%	40%	60%	80%	100%

The Corporate Fiber & Materials Benchmark Program (CFMB) A Wider Perspective of Preferred Cotton

Four Years of Benchmarking:

173 Participants (including subsidiaries, totaling116 individual CFMB submissions)17 CountriesEstimated Turnover USD\$ 640 Billion

Preferred cotton reporting has been steadily increasing over the past three years, with 105 of the 116 benchmark entrants reporting uptake for cotton in 2019 From the 105, 37 percent are 2025 Sustainable Cotton Challenge participants. The 2019 entrants reported a combined use of eight different preferred cotton programs from the 16 options available to signatories (i.e. cotton grown to specific sustainability standards and other initiatives).

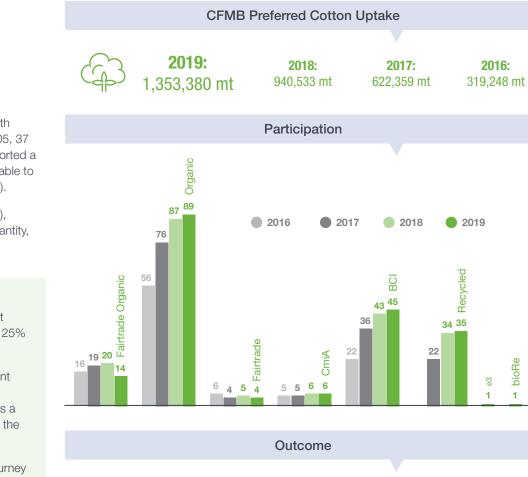
The most commonly reported preferred cotton was organic (85 percent participants), followed by BCI (43 percent), and in third place, recycled cotton (33 percent). By quantity, BCI is by far the highest volume reported.

There have been substantial gains made over the past few years in scaling the production of more sustainable forms of cotton, which is now higher than ever at over 1,353,380 mt in 2018. However, companies are actively sourcing less than 25% of the available sustainable cotton¹.

In order for sustainable cotton to become standard business practice, the amount of sustainable cotton grown and bought must increase significantly. The 2025 Sustainable Cotton Challenge sends a signal to millions of producers that there is a real demand for a more sustainable approach to cotton production that reduces the environmental and social costs.

The companies that have pledged their support are at various stages on their journey to using sustainable cotton, with some already securing all of their cotton from sustainable sources. However, all are clear that collaboration across the sector is needed to bring about transformative change.

1. Textile Exchange (production data: PFMR 2019, estimated consumption data: CFMB 2019)





647,026 ha Land under improved or organic management Preferred Cotton was reported consumed vs. 43% Conventional Cotton

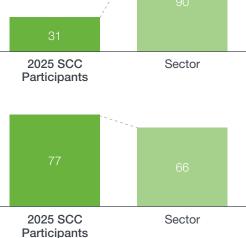
57%



2025 Sustainable Cotton Challenge Benchmark Performance Distribution

The following charts show the 2025 SCC participant's performance in the Corporate Fiber and Material Benchmark Program in 2019.

Number of Participants for Cotton Module 2025 SCC participants make up 34% of all the companies that completed the CFMB2019 cotton module 31 2025 SC Participan Average Scores for Cotton Module On average, 2025 SCC participants scored 11 points higher than the

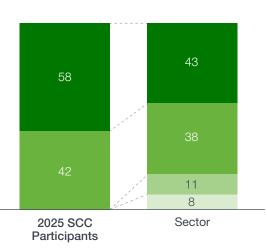


Performance Distribution of Cotton Module

sector for the CFMB cotton module.

Majority (58%) of the 2025 SCC participants are in the "Leading" performance band. The remaining are performing at "Maturing performance band.





Management Score for Cotton Module

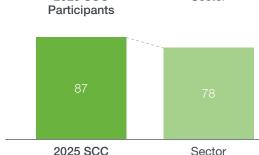
The 2025 SCC participants are performing above the sector average at incorporating sustainability practices in their cotton operations.

Relative Uptake Score for Cotton Module



Absolute Uptake Score for Cotton Module

At a score of 87, the 2025 SCC participants are also reporting higher absolute volumetric uptake compared to the sector average.



Risk
ManagementInvestmentTransparencyTargetsUptakeImpact2025 SCC
ParticipantsMaturingMaturingLeadingLeadingEstablishingSectorEstablishingMaturingEstablishingLeadingMaturingEstablishing

Participants

A Closer Look at 2025 SCC's Cotton Verification and Products Labeling

Adoption of Verification Models in Cotton Programs

2025 SCC shows higher coverage of verification across majority of the cotton programs used.



2025 SCC Sector

2025

SCC

Sector

2025

SCC

Sector

Full coverage

Partial coverage

No response in CFMB

2025

SCC

Sector

2025

SCC

Sector

2025

SCC

Sector

2025

SCC

Sector

Impacts and the Sustainable Development Goals (SDGs)

How preferred cotton (pCotton) interacts with the U.N.'s Sustainable Development Goals (SDGs)

U.N. Targets SDG 12	U.N. Indicators	Cotton
12.2: By 2030, achieve the sustainable management and efficient use of natural resources.	12.2.1: Reduced material footprint	Water, energy, GHG emissions (savings)
12.5: By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.	12.5.1: mt of material recycled	Recycled cotton (volume)
12.6: Encourage companies, especially large and transnational companies, to adopt practices and integrate sustainability information into their reporting cycle.	12.6.1: Number of companies reporting data (through the PFM Benchmark program)	pCotton reporting rates (number of companies)
SDG initial mapping: Initial mapping is based on Life Cycle Assessment. It links preferred fiber and materials to responsible consumption, sustainable agriculture, water, energy, climate, land use, technology and infrastructure.	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	6 CLEAN WATER AND SAN TATION 7 AFFORDABLE AND CLEAN ENRRY 10 10 13 CLIMATE CLEAN ENRRY 13 CLIMATE CLEAN ENRRY
SDG future mapping: The PFM Benchmark program will continue to map and measure linkages between adoption of pCotton and the SDGs.	1 0 3 GOOD HEALTH AND WELL-BEING 4 CUALITY COULTION 1 0 AND WELL-BEING 4 CUALITY COULTION 8 DECENT WORK AND RECONOMIC GROWTH 10 REDUICED INFEQUALITIES 11 SUSTAINABILITY SUSTAINABILITY	į ∮



Cotton and the SDGs

Several organization offer in depth information on how sustainable growing practices support the SDGs:

Textile Exchange:

Achieving the SDG through Organic Cotton: here.

GOTS: SDG Infographic: <u>here.</u>

IFOAM:

Organic SDG Benefits Infographic: <u>here</u> How Organic Agriculture helps meet the SDGs: <u>here.</u>

Fairtrade: Sustainable Development Report: here.

Cotton made in Africa: CmiA and the SDGs: <u>here</u>.

Better Cotton Initiative: BCI and the SDGs: here.

SDG Gateway: The Organic Cotton Accelerator (OCA) and the SDGs: <u>here.</u>

Q&A With Margot Lyons

COST CONTRACTOR

Margot Lyons Manager, Production Sustainability Coyuchi

Coyuchi has always been a pioneer in 100 percent organic cotton sourcing. What are some of the new steps you're taking to make even more progress and get to the next level?

Coyuchi was the first to bring organic cotton bedding to the United States almost 30 years ago and continues to use certified organic cotton today. Our mission is to provide organic cotton products that are both verified and support the longterm sustainability of organic farming communities. In 2019, we expanded our product assortment made from our 300TC Organic Sateen, which uses certified organic Fairtrade cotton sourced from Pratima, a farmer-owned producer group of almost 4000 organic cotton smallholder farming families in Orissa. The farmers at Pratima have used their Fairtrade premiums from products like these to fund a variety of projects from building community centers, to providing access to clean drinking water, creating a fund for the women in their community and providing access to quality, non-GMO organic seed.

Is there a special cotton product that you developed this year that takes Coyuchi's commitment to the next level?

This fall, we'll continue to build on our Arroyo Collection and will be introducing four new styles, which use 100 percent certified organic Fair Trade fiber sourced from Chetna Organic, an Indian, farmerowned producer group of 10,000+ organic cotton smallholder farming families comprised of nine cooperatives across Telangana, Orissa, and Maharashtra. Coyuchi has worked with Chetna as a member of the ChetCo shared value sourcing network since 2015. Working in cooperation with fellow members that span the supply chain, ChetCo's collaborative sourcing efforts have generated a 400+ percent increase in organic cotton purchases from Chetna's farming communities. The impact of improving the procurement process and payment timing for these farmers sends a clear message of market demand and provides economic security needed for the longevity of these communities.

Where do you go from here?

On Earth Day, Coyuchi announced a new partnership with White Buffalo Land Trust. We will be moving beyond organic to regenerative organic and have set a goal to launch our first product in 2023.

Photo Credit: Coyuchi

COYUCHI

Burton Makes Progress

BURTON

https://www.burton.com/us/en/sustainability-people

Burton was established in 1977 in a barn in rural Vermont and found its footing as the brand that pioneered the sport of snowboarding. The company has demonstrated commitment to its communities since day one by focusing on the rider experience, fighting for inclusion of the sport at ski resorts, and promoting gender equity by offering equal prize money for women and men since the very first Burton US Open Snowboarding Championships. Over the years, Burton has grown its product line to support the active outdoor lifestyle by offering bags, apparel, outerwear, and accessories.

In 2017, Burton doubled down on putting its values into practice by setting ambitious sustainability goals. This includes a commitment to grow its organic content for cotton fiber to 100 percent for product on shelves starting in November of 2021. This represents just three product development years since the 2017 baseline of 23 percent organic cotton fiber. The company has been making progress across all product categories. Beginning with the spring of 2020, all of Burton's inline tee shirts are made from 100 percent organic Peruvian cotton. Organic cotton protects the health of people and the planet by reducing overall exposure to toxic chemicals from synthetic pesticides. Because organic agriculture doesn't use toxic and persistent pesticides, choosing organic products is an easy way to help protect both consumers and the farming communities that are growing cotton. And a bonus – it's softer, too!

Burton is proud to be a member of the 2025 Sustainable Cotton Challenge, aligned with their commitment to minimizing negative environmental impacts and maximizing positive social impacts of the company.



Photo Credit: Burton

CA

C&A Goes High Tech

C&A, in partnership with Bext 360, Fashion for Good, Laudes Foundation, and the Organic Cotton Accelerator (OCA), as well as Kering, Zalando, PVH Corp, are pioneering a new initiative called the Organic Cotton Traceability Pilot at its supplier Pratibha Syntex. The objective of this pilot is to develop a proof of concept for the physical traceability of organic cotton from farm to store using the combination of blockchain, machine vision, artificial intelligence and product markers.

This pilot initiative combines multiple technologies to trace and identify the origin, purity and distribution of organic cotton. While these technologies have already been used before in other supply chains, they have not been yet been used in fashion.

While block chain technology allows for efficient integration of data from multiple sources in the supply chain, the use of machine vision, artificial intelligence, microbiome sequencing and on-product unique markers (including the physical markers: NFC, IN-Codes and fluorescent Li-Code's) help to guarantee data integrity as well as grade the quality and purity of materials. For machine-readable technologies like product markers, this can usually be done without altering the product itself. At the farm level, the solution's digital trail is creating transparency not only by verifying the material but also by ensuring the fair price brands are paying is reaching the farmers. Additionally, the digital trail simplifies logistical transactions for farmers and enable banks to provide them loans.

At the consumer level, the technology sheds a light on the suppliers and manufacturers that are behind a final product, increasing trust and transparency.

With testing underway to trace organic cotton from farm to gin, the next step will trace from gin to consumer and finally it will need to be proven at scale. If taken to this level, this initiative has potential to become a leading end-to-end traceability solution not only for organic cotton, but also for other preferred fibers.



Well Along the Journey



Our mantra at prAna is Clothing for Positive Change. It inspires us to make the right choices when designing and making our products. Since Spring of 2018, 100 percent of the cotton used in our products is organic. While we are proud of that accomplishment, it is only a moment in our journey to create positive change. We do this out of respect to our planet and its people.

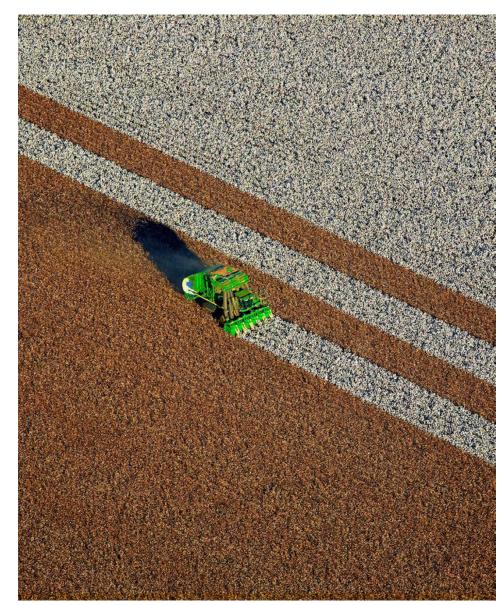


Russ Hopcus, President prAna

At Timberland, we aim to move beyond reducing our negative environmental impacts by setting a goal to source materials that are net positive for people and planet. We believe cotton can be sourced in a way that actually restores the environments it comes from and betters the lives of the people who grow it. This is why we are so excited to launch products in Fall of 2020 using Community Cotton. This cotton is sourced from smallholder farmers in Haiti through an agroforestry model which aims to improve farmer livelihoods and restore deforested land.



Zachary Angelini, Environmental Stewardship Manager Timberland



Q&A With Suhas Khandagale

Suhas Khandagale Global Material Manager for cotton H&M Group

Can you tell us about H&M Group's 2020 cotton goal?

Our commitment for 2020 is for all our cotton to be either recycled or sourced in a more sustainable way (meaning organic cotton or cotton sourced from the Better Cotton Initiative) and we are on the good way to get there. The figure of cotton sourced in a more sustainable way at H&M Group is 97 percent, as of today. Over the time, long-term actions around these three main types of cotton have been taken, such as engaging with external partners, collaborating with experts in this area or setting progressive goals within the H&M group, to mention a few.

What is the progress during 2019 toward this goal?

We joined BCI in 2010 and thanks to our commitment with our suppliers to constantly increase sourcing BCI cotton on our behalf, we are currently the world's biggest buyer of this kind of cotton. We are working together with BCI to develop and scale up the production and sourcing of better cotton from newer sourcing destinations, such as Ethiopia and other African countries. We are also working together with the Organic Cotton Accelerator, through our farm sourcing projects in various states in India to create a prosperous organic sector in the country. This sector faces several challenges, which result in a weak business case for farmers and sourcing risk for brands. Our farm sourcing projects helped to create a ground impact by assured buy back agreements and providing access to trainings and other resources, such as GMO-free seeds for the farmers, which are required for organic farming. The premium that is paid to the farmers motivates them to continue organic production, where the yield production is approximately 14 percent less compared with conventional cotton. During 2019, around 15,000 farmers were part of these sourcing projects and have shown desire to continue with organic cotton.

Are you using other sustainable cottons?

The percentage of recycled cotton may seem small in comparison with BCI cotton or organic, we are a leading company in buying recycled cotton according to Textile



Photo Credit: H&M Group

Exchange and we constantly promote the use of recycled cotton in our fabrics and yarn by new technical solutions driven by our own experts in production. A big part of our denim collection is made with cotton blended with post-consumer recycled cotton from old garments. Part of these garments come from our global garment collecting initiative, which is a great example of how we can close the loop in fashion. H&M's latest collection includes fleece sweatshirts and joggers made of recycled cotton blended material, while H&M Home offers cotton rugs made from pre-consumer cotton waste from H&M Group's supplier factories in Bangladesh. And we have exciting projects ahead. We will be part of the Ellen MacArthur Foundation's Redesign project through two of our brands, H&M and Weekday. The project consists of rethinking the design and production process of denim products and move towards a circular process.

What can we expect in the years to come in your cotton sourcing strategy?

We have a steady progress on reaching 100 percent cotton sourced in a more sustainable way. For 2019, this figure was 97 percent (meaning recycled, organic cotton and BCI cotton). One of H&M Group's brands, Monki, already achieved this goal in 2018 and we are working hard for all the brands within the group to reach this goal by 2020. Beyond 2020, we will focus in increasing our recycled cotton share even more, finding alternatives to virgin cotton and continue working towards stronger industry standards for both organic and BCI cotton.

H&M Group

Lindex Case Study

LINDEX

Supporting Women Farmers Converting to Organic Cotton

Lindex, an international fashion company, was one of the first signatories of the Sustainable Cotton Communiqué in 2017. Today, 68 percent of its cotton is organic and its entire baby assortment is made of organic cotton, making it one of the top ten users of organic cotton worldwide. For its latest sustainable cotton project, Lindex is working with CottonConnect to train 350 women farmers in India in the Women in Cotton program.

"We decided to combine our commitment to organic cotton with the responsibility we feel towards women in our value chain, from the field to the fitting room," said Anna-Karin Dahlberg, Corporate Sustainability Manager with Lindex. "These women cotton farmers are from tribal areas that are isolated and cut-off from mainstream development. They are converting from conventional farming to organic farming, but have only a very basic knowledge of organic farming practices, and therefore will benefit from some specific organic cotton training."

Lindex is funding this two-year program with surplus from One Bag Habit, a joint initiative by Lindex, KappAhl and H&M, which uses the surplus from the sale of shopping bags to support causes that drive sustainable development.

CottonConnect is an organization with a mission to transform the cotton industry

for good by enabling brands and retailers to develop a more robust and resilient cotton supply chain. Beginning in October 2019, the two-year Women in Cotton program in Madhya Pradesh, India, will support the farmers' conversion journey from conventional cotton, with a focus on good agricultural practices, biodiversity and improving integrity of cotton.

The training covers multiple aspects of agronomic interventions, including seed selection and spacing, water, nutrition and pest management through organic measures, as well as sessions on health and safety, and decent work. Farmers will also learn about financing organic certification and the organization of farmer collectives.

Having spent the last seven years working with partners to support thousands of organic cotton farmers across India, CottonConnect recognizes how crucial education is to scaling up organic practices, and for farmers to understand the benefits. Alison Ward, CottonConnect's CEO says: "Our partnership with Lindex seeks to transform the organic cotton sector not only by increasing the volumes of organic cotton and by working with women who are often neglected in training programs; but also, and very importantly, by creating a direct link between the farms and the brands. We believe this is essential to truly change cotton supply chains."

This latest initiative on cotton, the most commonly used fiber in Lindex's garments, is part of the company's sustainability promise: to make a difference for future generations, by empowering women, respecting the planet and ensuring human rights.

Farmer story: Kanu Bai has a small cotton farm (1.41 ha) in Dhasalgaon village, in Khargone district, Madhya Pradesh, India, and started attending the Lindex/ CottonConnect program training. Having previously spent money on purchasing fertilizers and pesticides, she has now learned how prepare her own compost, and is fully aware of the harm chemical inputs can have to the environment and human health. Kanu says it is rare to have training for women, and the sessions have become a platform for women to come together and interact. She now knows more women in her community and is more confident to go out and get things done.



Photo: Cotton Connect

Brooke Summers Chats With Eloise Bishop

MP COUNTRY ROAD



Brooke Summers Supply Chain Consultant Cotton Australia



Eloise Bishop Head of Sustainability Country Road Group



What is Country Road's sustainable cotton goal?

By 2020, we're aiming for 100 percent of Country Road's cotton products to support more sustainable farming practices. This goal is a part of our Good Business Journey, a program designed to embed sustainability into day-to-day business practices.

Why the focus on cotton?

Cotton is one of our favorite fabrics. In fact, our very first product – the iconic white shirt – was crafted from pure cotton. Since then, cotton has remained a strength of our brand across Woman, Man, Child and Home. Sustainability is becoming ever more important to our business. Customers are increasingly asking questions about where our products come from and how they are made. Cotton being such an integral part of our business means that we not only have a responsibility to do the right thing, but we also have great potential to drive positive change within the industry.

Sourcing Australian cotton goes handin-hand with our brand ethos and our sustainability focus. How does Country Road define "sustainable" cotton?

Like many brands, we take a portfolio approach to sustainable cotton. We focus on Australian, recycled and organic cotton. Country Road is also a proud member of the Better Cotton Initiative (BCI), believing in the power of shared learning and collaboration.

BCI is the largest cotton sustainability program in the world and takes a holistic approach to transforming global cotton production. Through this program, farms are trained to use water more efficiently, care for the health of the soil and natural habitats, reduce the use of harmful chemicals as well as respect the rights and wellbeing of workers.



Country Road started working with Cotton Australia five years ago, when our formalized sustainability journey had just begun. The partnership has since evolved beyond cotton sourcing – we're now in the early stages of planning an exciting new project around the stewardship of natural resources in cotton landscapes.

Photo Credit: Cotton Australia

MetaWear's RESET Project

METAWEAR



Marci Zaroff Founder & CEO ECOfashion Corp

MetaWear delivers customized, full package sustainable textiles for brands and retailers. With an office in India and seasoned team on the ground, we oversee all facets of sourcing and product development, through production, quality control, inspections and logistics. From farm, fiber and raw materials, to full transparency, certifications and manufacturing, to marketing and communication strategy, MetaWear offers our partners a vertically-integrated, onestop shop to co-create turnkey circular and flat knits, as well as woven apparel and home textiles. With over two decades of experience, story-doing and market leadership pioneering and overseeing organic, regenerative and sustainable supply chains, MetaWear serves as an unparalleled solution provider-the "Intel inside" of sustainable fashion and home.

RESET, our unique and innovative farm project in India's cotton belt, is dedicated to "Regenerating the Environment, Society and Economy through Textiles." By partnering with our brand and retail clients, we are building a win-win-win business model—from source to story. Focusing on the reduction of human and environmental impacts, zero-budget natural farming, climate change mitigation and circularity through our bio-mass post-harvest stalk collection, RESET supports and trains our farmers to improve their livelihoods, turn waste into worth, build healthy soil, and capture carbon through regenerative and transitional organic practices. In 2019, the RESET program included 545 farmers and 46 villages, and is preparing to scale and meet our goal of 15,000 farmers in five years. Our intention is to double current farmer income levels, increase efficiency and yields by 25 percent, convert at least 62,500 acres of conventional cotton from degenerative to regenerative production systems, completely eliminate GMOs and devastating high interest farmer loans, sequester 160,000 metric tons of carbon, remove 337,500 kgs of toxic pesticides, and increase farm biodiversity (species & genetic) by 100 percent.

Together, we can empower lives, drive full traceability, authenticity and accountability, and RESET both agriculture and popular culture alike.



Photo: Leslie Hassler

The Answer Beneath Our Feet: The Importance of Soil Health



Starting with the soil might seem like a strange way to address the multiple crises that the 2025 Sustainable Cotton Challenge is trying to tackle, but taking the soil seriously is essential if we are to have a meaningful impact.

Far from being boring, ubiquitous and brown, soils hold the very key to unlocking the challenges we face. This is something championed by organic regenerative farmers the world over and well understood by many of the schemes recognized by the Challenge.

Why are soils so important?

One reason is that soils store two to three times more carbon than the atmosphere does. Managed well, soils are a huge carbon sink, managed badly they become a carbon source. Healthy soils are ones that are rich in organic matter and teeming with life. By building up organic matter through methods like composting and growing green manures (plants that naturally fix nitrogen from the air), healthy soils can grow healthy plants that are naturally more resilient to pests and diseases, can cope better in times of flood and drought (because soils rich in organic matter act as a sponge), and are home to a multitude of other species that support wider ecosystems, from pollinators to pest predators, thus supporting a wide range of biodiversity.

Unfortunately, over the years the intensification of agriculture has seen the overuse of artificial nitrogen fertilizers, which have played havoc with soils and resulted in depleted levels of organic matter. This has serious implications not only for longterm crop productivity, but also in terms of climate and biodiversity impacts.

This is why good soil management is a vital cornerstone of sustainable farming, and ultimately a sustainable fashion future, because we'll need healthy soils if we're to produce cotton in a way that's fit for the future and helps rather than hinders the fight against climate change.

Case Study:

Improving soil health through organic farming

Parasram switched to organic farming six year ago and became a certified organic farmer in 2018/19. Hailing from the state of Madhya Pradesh in India, which accounts for 43 percent of India's and 24 percent of world's organic cotton production, Parasram was growing cotton the conventional way before he began adopting organic farming practices. The initial years of the switch were difficult. However, the positive results that he saw in his farm strengthened his confidence in organic cotton farming. He became part of CottonConnect's Organic Cotton Farming Program in 2019. The program trains farmers to grow good quality organic cotton, securing organic cotton for the future and testing the integrity.

The training sessions influenced him to reevaluate his cotton growing practices and adopt organic methods of cotton farming. The organic farming practices have helped Parasram significantly improve his income. The immense benefits that organic farming brings to soil health and overall biodiversity are yielding results for him in many other ways too. As was the general practice, Parasram used to practice mono-cropping which led to problems ranging from lower production of crops, soil health deterioration and rising crop diseases. Today, he grows legumes along with cotton. This practice of intercropping has improved soil nutrient levels of his farm. Also, the legume produce serves as an additional source of income. To nourish the soil, he prepares his own farm bio-inputs such as the green manure Azolla (aquatic fern), CPP (Cow Pit Pat) manure, digested bio-gas slurry, and vermi compost. These practices have reduced his expenditure on pesticides and fertilizers and provide additional benefits, for example the bio-gas plant produces methane gas which is used for cooking.

Motivated by the success of organic farming, Parasram encourages fellow farmers to adopt these practices. He loves to share his knowledge and experience on organic agriculture with his peers through his unique form of poetry.



Sustainable Cotton Initiatives

Working Toward The Same Goal



The standards and initiatives listed to the right are currently tracked in Textile Exchange's Preferred Fiber & Materials Benchmark Program. Through this program we have been able to track the use of more sustainable fibers and materials from 111 global brands for several years and are using this data to build a track record of growth and success.

These initiatives include Abrapa, BASF e3™, Better Cotton Initiative (BCI), Cleaner Cotton, Cotton made in Africa (CmiA), Fairtrade, Field to Market, ISCC, myBMP, Organic cotton



Better Cotton Initiative



Cleaner Cotton

SCC

ISCC



Cotton made in Africa

FAIRTRADE

Fairtrade Cotton

MBMP

*my*BMP





ABRAPA

ABRAPA

Organic Cotton

Regenerative

Organic Certified

Regenerative Cotton



cotton

BASF e3™

Field to Market

Field to Market

RFFI Cotton



Recycled Cotton





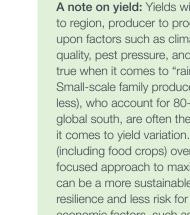
Transitional Cotton



U.S. Cotton Trust Protocol

(Organic Content Standard [OCS], Global Organic Textile Standard [GOTS]), recycled cotton (Recycled Claim Standard [RCS], Global Recycled Standard [GRS] and SCS Recycled Content Standard), REEL Cotton, Regenerative (Regenerative Organic Certified), Transitional cotton (GOTS, OCS, Transitional), and our newest initiative, the U.S. Cotton Trust Protocol.

By committing to use cotton from these initiatives and standards, brands are ensuring that the intentions of their sustainable sourcing strategies are maintained.



A note on yield: Yields will vary from country to country (region to region, producer to producer and year to year), depending upon factors such as climatic conditions, water availability, soil quality, pest pressure, and farmer resources. This is particularly true when it comes to "rainfed versus irrigated" production. Small-scale family producers (on landholdings of 2 hectares or less), who account for 80-90 percent of farmers, primarily in the global south, are often the most vulnerable, particularly when it comes to yield variation. Optimizing yield and farm diversity (including food crops) over the longer term, rather than a single focused approach to maximizing cotton production and yield, can be a more sustainable approach and can result in higher resilience and less risk for the farmer. In addition, balancing economic factors, such as yield, with sustainability outcomes and impacts, such as soil and water quality/conservation, food security and farm net income, should also be carefully considered in any cotton sustainability strategy.

A note on LCA data: While Life Cycle Assessment (LCA) help us evaluate the inputs and impacts of production systems, it is limited to a restricted set of criteria more suitable for a factory than a farm. In addition, conditions will vary from year to year, region to region, and farm to farm. These variances can be obscured when LCAs are presented as a global average (even if volume-based weightings are applied). Other key impacts that are not captured in an LCA include biodiversity and socioeconomic impacts which are critical to a sustainability agenda.

A Direction of Travel

According to the United Nation's Intergovernmental Panel on Climate Change (IPCC), the agriculture, forestry, and other land use sector is responsible for an estimated 23 percent of anthropogenic greenhouse gas (GHG) emissions,¹ mainly from deforestation and agricultural emissions from livestock, soil, and nutrient management.² There is therefore a clear and urgent need to adopt and promote agroecological production methods that sequester carbon, are climate resilient, and work with nature rather than against it^{3,4}.

The 2025 Sustainable Cotton Initiatives are recognized based upon having a clear code, guideline or standard that, for a base line,

¹ IPCC (2019). Summary for Policymakers. In: P.R. Shukla, J. Skea, E. Calvo Buendia, V. Masson-Delmotte, H.- O. Pörtner, D. C. Roberts, P. Zhai, R. Slade, S. Connors, R. van Diemen, M. Ferrat, E. Haughey, S. Luz, S. Neogi, M. Pathak, J. Petzold, J. Portugal Pereira, P. Vyas, E. Huntley, K. Kissick, M. Belkacemi, J. Malley (eds). Climate Change and Land: an IPCC special report on climate change, desertification, land degradation, sustainable land management, food security, and greenhouse gas fluxes in terrestrial ecosystems. In press. Retrieved from https://www.ipcc.ch/site/assets/uploads/ sites/4/2019/12/02_Summary-for-Policymakers_SPM. pdf

² IPCC [Smith, P., Bustamante, M., Ahammad, H., Clark, H., Dong, H., Elsiddig, E. A., Haberl, H., Harper, R., House, J., Jafari, M., Masera, O., Mbow, C., Ravindranath, N. H., Rice, C. W., Robledo, Abad C., Romanovskaya, A., Sperling, F., & Tubiello F.J (2014). Agriculture, Forestry and Other Land Use (AFOLU). In O. Edenhofer, R. Pichs-Madruga, Y. Sokona, E. Farahani, S. Kadner, K. Seyboth, A. Adler, I. Baum, S. Brunner, P. introduces improved production practices across a number of core areas such as water use and management, integrated pest management. Other programs introduce regenerative soil practices and organic production system practices designed to build ecosystems and biodiversity.

One of the 2020 goals for this program will be the adoption of key performance indicators (please see the report on the Delta Project on page 11) that will allow all of these programs a way to collect consistent impact data and adopt strategies for the promotion and implantation of continuous improvement.

Eickemeier, B. Kriemann, J. Savolainen, S. Schlömer, C. von Stechow, T. Zwickel. & J.C. Minx (eds), Mitigation of Climate Change. Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA. Retrieved from https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_wg3_ar5_chapter11.pdf

³ Nuijten, E., Messmer, M. M., & Lammerts van Bueren, E. T. (2017). Concepts and strategies of organic plant breeding in light of novel breeding techniques. Sustainability, 9(1), 18. DOI: 10.3390/ su9010018

⁴ Devos Y., Demont M., Dillen K., Reheul D., Kaiser M., & Sanvido O. (2009) Coexistence of Genetically Modified and Non-GM Crops in the European Union: A Review. In: Lichtfouse E., Navarrete M., Debaeke P., Véronique S., Alberola C. (eds), Sustainable Agriculture. Springer, Dordrecht. DOI: 10.1007/978-90-481-2666-8_14

Cotton Code or Standard	Farm Requirements	Verification Systems	Certification	
BCI	Grown to BCI Criteria	Self-Assessment, 2 nd and 3 rd Party Verified		
Cleaner Cotton	Producers	2 nd Party Verified	3 rd Party Certified	
CmiA	Grown to CmiA Criteria	Self-Assessment, 3 rd Party Field / Gin		
e3	Grown to Code	2 nd Party Verified, FPC		
Fair Trade Cotton	Producers certified to Fair Trade Standard		3 rd Party Certified	
Fair Trade Organic	Grown to both Organic and Fair Trade Standards		3 rd Party Certified	
Field to Market	Grown to Code	2 nd Party Verified, FPC		
ISCC	Grown to Standard		3 rd Party Certified	
Organic Cotton	Grown to Organic Production Standards		3 rd Party Certified	
REEL	Grown to REEL Code	2 nd Party Verified	By Request – 3 rd Party Certified	
U.S. Cotton Trust Protocol	Grown to Code	2 nd and/or 3 rd Party Verified, FPC		

Note: This list is not intended to be exclusive. Other Codes or Standards that meet similar criteria may be included.

Note: FPC refers to the Field Print Calculator



ARRAPA

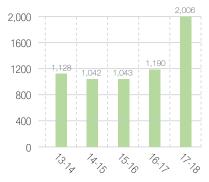


∂ abrapa.com.br

The Responsible Brazilian Cotton program (ABR) epitomizes the union of cotton growers in favor of a more sustainable cotton production in Brazil. ABRAPA aims to protect and preserve the integrity of workers. It is 100 percent in line with Brazilian labor laws (CLT), International Labor Organization (ILO) Conventions and Regulating Norm 31, which controls work safety, occupational health and work environment.

ABR participating production units have a zero tolerance policy toward child labor, with non-compliance preventing certification.

5 Year Production trend (,000)



The ABR offers workers a series of guarantees: formal registration, fair wages, extra hours as per law, weekly day off and paid vacations; safety in the workplace; lodging, meals, transportation, medical care, and recreational structure; nondiscriminatory treatment; freedom to join unions and support to collective bargaining.

Under the environmental pillar, growers are encouraged to adopt best practices that combine agricultural production and environmental protection.

ABR promotes protection of water sources, rivers, and reservoirs; preservation of biomes and of the soil; air, water and soil quality.

Producing Countries

Brazil.



The Brazilian Association of Cotton Producers aims to increase the profitability of the sector through the union of its agents and seek strategic sustainability, acting politically, socially and economically with the public and private sectors, practicing management of results in four aspects: fiber quality, traceability, sustainability and commercialization.

Overview

The Brazilian Responsible Cotton program - ABR, is the union of cotton growers in favor of a more sustainable cotton production in Brazil, focused on the progressive evolution of good agricultural, social, environmental and economic practices.



Cotton Grown (2016/17) 7.52% Fiber Production Projected to Increase?

Yes. Estimates show 2,170,211 mt and 1,227,735 ha in 2018-19.



95% rainfed, 5% irrigated

Initiative data is referenced to Textile Exchange Preferred Fiber & Materials Market Report 2018 which is sourced from and verified by respective initiative.

The market share indicated in this page is initiative dependent and may differ from what is outlined in Global Preferred Cotton Market due to overlapping programs between initiatives (i.e. as BCI equivalency).

ABRAPA



LCA Availability

n/a

Water Consumption: No LCA data.

Primary Energy Demand: No LCA data.

Global Warming: No LCA data.

Eutrophication:

No LCA data.

Water Management

ABR has 21 verification items related to the efficient use and conservation of water within the criteria of "Environmental Performance" and "Good Agricultural Practices."

Soil Fertility

18 criteria related to soil health, including: minimum crop, crop rotation, soil fertility analysis, organic matter, no-till, erosion prevention and soil salinity, fertilizer efficiency and pH correctives, precision agriculture, map soil fertility, fertilizer application at variable rates and use of biome-adapted cultivars, and cotton growing areas outside the Amazon biome, and cultivated in areas that were once farmed.

Biodiversity

ABR certification is 100 percent aligned with all federal laws in the country. Promotes conservation of biomes, water sources, fauna, flora and environmental recovery.

GMOs Permitted?

Yes - regulated and carefully managed. ABR has specific items regarding the GMO and its management of the resistance.

Use of Hazardous Pesticides

The farm has a strategy to discontinue the use of WHO Class I pesticides, listed in the Rotterdam Convention and Endosulfan.

Use of Synthetic Fertilizer

Permitted - In the criterion of good agricultural practices the ABR has five certification items related to the sustainable use of synthetic fertilizers.

$\tilde{\lambda}_{\text{ACC}}^{\text{ACC}}$ Social Considerations / Regulations

The social theme is aligned with the legal precepts that protect and preserve the integrity of the worker. 100 percent aligned with Brazilian labor legislation - Consolidation of Labor Laws (CLT); 100 percent aligned with the conventions of the International Labor Organization (ILO); 100 percent aligned with Regulatory Standard 31, which regulates work safety, occupational health and the work environment.

Verification / Certification (farm level)

Diagnostic evaluation, plan for the correction of nonconformities and certification by third parties.

Chain of Custody (supply chain)

The model adopted (EAN 128 - subsidy B) was based on the system implemented by the USDA. The current standard uses a Serial Shipping Container Code (SSCC) logistic unit serial code - one of the most important application identifiers used in product traceability - containing 18 digits preceded by a two-digit prefix (00) that identifies the EAN / UCC code type. It is a simple, practical and very safe system for the traceability of cotton bales, which can be implanted by all producers and cottons without major investments.

Product Marketing / Labeling

Limited in the marketing of products in the bales.

Onsumer Recognition

Low levels of awareness in consumer recognition.

Livelihoods

Maybe some price differential paid directly to farmers, who are paid based on market price, prevailing quality and whether or not it is certified cotton.

Cost Implications / Impacts

No membership fee for the ABR application or licensing fees.

Quality Perception / Implications

Consistently high quality, among the highest in the world in all parameters.

BASF e3[™]

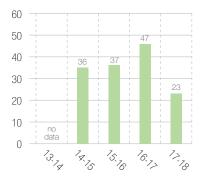


ℰ e3cotton.us

Only e3[™] brings together a unique blend of integrity and authenticity to provide peace of mind and sustainable credibility. The consumer can now know who grew the cotton in their apparel and under what conditions it was produced.

The core focus of sustainable farming practices is to meet the current needs for productivity and profit ensuring future generations can do the same. Their definition of sustainable also includes the use of new technologies as well as proven

5 Year Production trend (,000)



production methods to optimize water use, increase soil and plant health, preserve land and reduce energy. Sustainable farming may or may not use plants improved through modern biotechnology.

Dedicated e3[™] cotton growers commit to certification and verification through independent audits, allowing for tracking of specific environmental and social measurements.

Producing Countries

U.S.

Objective

To create a more sustainable American cotton landscape.

Overview

e3[™] is BASF CropScience's more sustainable cotton option. It is grown in the U.S. with care by cotton producers striving to improve their sustainability in production of the highest-guality upland cotton for apparel and home furnishings.



Growth in Production (2016/17-2017/18) ↓ 52%



Yield

754/lb per acre to more than 2,000/lb per acre [138 kg/ha to 367 kg/ha]





Yes. Estimates show 160,754 mt and 114,737 ha in 2018-19.



Rainfed / Irrigated

Combination

Initiative data is referenced to Textile Exchange Preferred Fiber & Materials Market Report 2018 which is sourced from and verified by respective initiative.

BASF e3™



No, but tracking systems are provided via tools that measure producer operations activities and field level activities.

Water Consumption:

36 percent of e3[™] producers use drip irrigation or low pressure sprinklers and flow meters. At least 73 percent of e3 producers practice residue management, use cover crops, mulching, or other evaporation prevention measures.

Primary Energy Demand:

34 percent of e3[™] producers use renewable or alternative energy such as ethanol, biodiesel, solar or wind energy.

Global Warming:

92 percent of e3[™] producers reduce nitrous oxide emissions through optimum rates and timing of nitrogen fertilizer or use of a nitrogen stabilizer. 46 percent of e3[™] producers plant new trees, maintain forest areas and pastures, to offset carbon emissions.

Eutrophication:

79 percent of e3[™] producers use grass waterways or filter strips to control water runoff and 46 percent use vegetative borders to reduce nutrient runoff.

Water Management

Aims to reduce irrigation water use.

Soil Fertility

Promotes soil health and stewardship. Activity is assessed on various factors including land use and soil carbon. Concept based on continuous, measured improvement.

Biodiversity

Promotes biodiversity conservation. Activity is assessed on various factors including conservation. The concept is to improve one's performance on these various parameters over time.

GMOs Permitted?

Yes.

Use of Hazardous Pesticides

Pesticide use is measured under e3[™] guidelines, while IPM is encourage through precision farming technologies, and subject to US regulations regarding pesticide use. 92 percent of e3[™] producers use nonchemical means of pest control including Bt varieties and bio-based insecticides and 91 percent preserve beneficial insects by using scouts who can identify and understand economic value of useful insects.

Use of Synthetic Fertilizer

Fertilizer use is measured under e3[™] program criteria, along with crop rotation, compositing and cover crop usage. 98 percent of e3[™] producers conduct soil tests and 94 percent applied nutrients based on crop and soil needs and/or University recommendations

Social Considerations / Regulations

US cotton growers are all held to high standards by law for worker health and safety. Equal Employment Opportunity, Child Labor Legislation, Personal Protection and Migrant Labor Laws all must be adhered.



Self-evaluation and third-party audits.

Chain of Custody (supply chain)

CoC to the mill (for further content claims use).



Limited on product marketing.



No data.

Livelihoods

e3[™] farmers are paid a small per bale incentive to reinvest in sustainable improvement practices.

Cost Implications / Impacts

Small price differential paid to farmers, negotiated with individual brand/retailer.

Quality Perception / Implications

No known quality implications.



Better Cotton Initiative



bettercotton.org

The Better Cotton Initiative (BCI) brings together farmers, ginners, traders, spinners, mills, cut and sew, manufacturers, retailers, brands, civil society and grassroots organizations in a unique global community committed to developing Better Cotton as a sustainable mainstream commodity.

5 Year Production trend (,000)



Better Cotton Initiative (BCI) cotton production including equivalents increased from 665,789 mt in 2012/13 to 3.26 million mt in 2016/17. The BCI Standard made up approximately 50 percent of all BCI cotton produced in 2016/17. The remaining ~50 percent of BCI cotton was produced according to the BCI equivalents ABRAPA, Cotton made in Africa and *my*BMP.

Producing Countries

In the 2017/18 cotton season, Better Cotton was produced in China, India, Israel, Kazakhstan, Madagascar, Mali, Mozambique*, Pakistan, South Africa, Tajikistan, Turkey and the USA. An additional 10 countries produced Better Cotton under BCI recognized equivalent standards - CmiA (Burkina Faso, Cameroon, Cote d'Ivoire, Ghana, Mozambique, Tanzania, Uganda and Zambia), *my*BMP (Australia) and ABRAPA (Brazil).

*Mozambique is counted once.

Objective

To transform the market by making Better Cotton a sustainable mainstream commodity.

Overview

BCI sets out to improve the sustainability of mainstream cotton production. Growers must meet core environmental and social requirements for their cotton to qualify as Better Cotton. Continuous improvement is a key element of the Assurance Program.

Fiber Production (2017/18)

2,806,500 mt (BCI Standard) 2,335,000 mt (BCI Benchmark)

Growth in Production (2016/17 - 2017/18)

↑33.12% (BCI Standard)↑86.11% (BCI Benchmark)

BCI collects yield data at country-level. In the

vast majority of cases, implementation of the Better Cotton Standard System leads to higher yields, but the measures of improvement vary. For example, in the 2017/18 season, BCI Farmers in China had 14% higher yields and BCI Farmers in Pakistan had 15% higher yields than Comparison

Farmers in the same geographic areas¹.

Market Share of Total Cotton Grown (2017/18)

8.76% (BCI Standard) 10.53% (BCI Benchmark)

Fiber Production Projected to Increase?

Yes



Initiative data is referenced to Textile Exchange Preferred Fiber & Materials Market Report 2018 which is sourced from and verified by respective initiative.

The market share indicated in this page is initiative dependent and may differ from what is outlined in Global Preferred Cotton Market due to overlapping programs between initiatives (i.e. BCI equivalency). 1. Find the full results at bettercotton.org/about-better-cotton/farmer-results

YYYY T

Yield

Better Cotton Initiative

LCA Availability

BCI understands the sector's expectations for measurable indicators of improvement and impact, and is currently developing reliable indicators that offer value to members while ensuring the credibility and feasibility of the Better Cotton Standard System.

Water Consumption:

No LCA data.

Primary Energy Demand: No LCA data.

Global Warming:

No LCA data.

Eutrophication:

No LCA data.

Water Management

Water Stewardship is one of the seven Better Cotton Principles and Criteria. Management practices address water resources identification and mapping, soil moisture management, efficient irrigation practices, water quality, and participation in collective action to promote the sustainable use of water. For example, in the 2017/18 season, BCI Farmers in India used 10 percent less water than Comparison Farmers in the same geographic areas. Find the full results at <u>Bettercotton.org/farmer-</u> results/

Soil Fertility

Soil Health is one the seven Better Cotton Principles and Criteria. Management practices address soil analysis and type identification, enhancement of soil structure and fertility, and nutrient cycling improvement.

Biodiversity

Biodiversity and Land Use is one of the seven Better Cotton Principles and Criteria. Management practices address identifying and mapping biodiversity resources, identifying and restoring degraded areas, enhancing populations of beneficial insects, ensuring crop rotation and protecting riparian areas.

GMOs Permitted?

Yes. BCI is technology neutral with respect to GM cotton, and will neither encourage farmers to grow it, nor seek to restrict their access to it.

Use of Hazardous Pesticides

Pesticides listed in Annex A and B of the Stockholm convention, Annexes of the Montreal Protocol, and Annex III of the Rotterdam convention are forbidden. Producers must phase-out active ingredients that are known or presumed to be highly or extremely hazardous, carcinogens, mutagens or reproductive toxicants.

Use of Synthetic Fertilizer

The use of fertilizers (organic and inorganic) is addressed in the Soil Health and Water Stewardship Principles and Criteria. Producers should develop a better understanding of, and have better control of, fertilizer use.

Social Considerations / Regulations

The Better Cotton Standard is aligned with the ILO. Decent Work agenda requirements on gender. Guidance on topics such as child labor, sanitation facilities and equal payment are also included in the Standard.

Verification / Certification (farm level)

Self-assessment, Second-Party Credibility Checks by BCI and/or partners, Third-Party Verification by independent verifiers, and for large-farms in the US, a US Group Management model.

Chain of Custody (supply chain)

Physical segregation farm to gin; mass balance gin to retailer.

Product Marketing / Labeling

On-product and off-product communications. The BCI On-Product Mark can be used by BCI's Retailer and Brand Members. Strict criteria for use are set out in the Better Cotton Claims Framework



Consumer Recognition

The introduction of the Better Cotton Claims Framework enabled BCI's Members to communicate their commitment to BCI and Better Cotton to their consumers.

Livelihoods

No price differentials for farmers but yields and income expected to improve. The volume-based fee paid by BCI's Retailer and Brand Members is invested into farmer training and capacity building programs. For example, in the 2017/18 season, BCI Farmers in India had 24 percent higher profits and BCI Farmers in China had 25 percent higher profits than comparison farmers in the same geographic areas. Find the full results at <u>Bettercotton.org/farmerresults/</u>.

S Cost Implications / Impacts

No price differential at point of sourcing but membership and volume-based fees apply.



No known quality implications.

Cleaner Cotton™



ℰ sustainablecotton.org/cleaner-cotton-tm

SCP's farm program brings together a community of family farmers growing cotton in California's Fresno, Madera and Merced counties. With SCP's support and guidance from experts at UC IPM and UC Cooperative Extension, these growers are changing the way they farm by implementing biologically-based practices, which protect the land, air and water resources in the region. The fiber that these farmers produce as part of SCP's program is called Cleaner Cotton[™].

5 Year Production trend (,000)

1.0

0.8

0.6

0.4

0.2

0.6

0.61

17.75

15. 76

10. 12

12,70

Cleaner Cotton[™] fiber is high quality fiber, available in both Pima and Acala varieties. It utilizes biological farming practices and eliminates the 11 most toxic chemicals used in conventional cotton cultivation in California, reducing toxicity in the air, soil and watersheds.

Cleaner Cotton™ receives a modest premium, paid directly to the farmer to help support these practices. It is tracked from field to spinner, using the USDA Permanent Bale Identification barcode and data.

Cleaner Cotton production increased from 258 mt in 2012/13 to 699 mt in 2016/17.

Producing Countries

U.S. - California.

Objective

Cleaning Up Cotton In California.

Overview

The Sustainable Cotton Project works with California cotton growers to reduce the harmful impacts of pesticide use from cotton production on the air, water and soil in the region and to market the cotton they grow in the project as Cleaner CottonTM.



Market Share of Total Cotton Grown (2017/18) 0.004%

Growth in Production (2016/17–2017/18) +44%

Yield Average 748 kg/ha Fiber Production Projected to Increase?

Estimates show 914 mt and 652 ha in 2018-19.



Initiative data is referenced to Textile Exchange Preferred Fiber & Materials Market Report 2018 which is sourced from and verified by respective initiative.

Cleaner Cotton™



n/a

Water Consumption: No LCA data.

Primary Energy Demand: No LCA data.

Global Warming: No LCA data.

Eutrophication: No LCA data.

Water Management

Some cotton grown on drip irrigation.



Compost and cover crops encouraged to maintain soil health and productivity.

Biodiversity

Promotes farming systems that increase beneficial insect habitat and survival.

GMOs Permitted?

Yes - sold separately from non-GMO.

Use of Hazardous Pesticides

Disallows the use of the 11 most toxic chemicals used in cotton in California unless pests threaten to cause economic loss, or other lower-risk options are exhausted. IPM and biological alternatives encouraged. Up to 50 percent reduction in chemical inputs over conventional.

Use of Synthetic Fertilizer

Growers encouraged to adopt biological methods to improve soil quality.



U.S. cotton growers are all held to high standards by law for worker health and safety.

Verification / Certification (farm level)

Second party monitoring.

Chain of Custody (supply chain)

Bale identification system - USDA bar code on each bale.



Product Marketing / Labeling

Marketed and trademarked as Cleaner Cotton™.

Consumer Recognition

Yes, consumer messaging via products and website.



Livelihoods

A modest price differential is paid directly to the farmer.

Cost Implications / Impacts

Price differential paid to farmer.



No known quality implications.

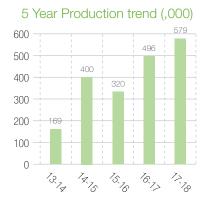
Cotton made in Africa



@ cottonmadeinafrica.org

Cotton made in Africa (CmiA) is an initiative of the Aid by Trade Foundation (AbTF) that works to promote economically, ecologically, and socially sustainable cotton production in Africa.

CmiA helps smallholder farmers improve their living conditions and profit from fair contracts and training in efficient and environmentally sound cultivation methods. The CmiA verification process also includes the workers in the cotton gins. Together with partners, CmiA additionally invests in community projects that provide school infrastructure, set-up WASH and nature conservation projects and empower women.



Growers must meet minimum environmental and social requirements for their cotton to qualify as CmiA. GMOs are banned in the CmiA standard.

With production having increased from 144,909 mt in 2012/13 to 495,839 mt in 2016/17, CmiA is a major player in the cotton sector of Sub-Saharan Africa.

The Aid by Trade Foundation has introduced a CmiA Organic Standard into its family of standards, which combines existing organic standards with the social and economic production criteria of CmiA.

Producing Countries

Cameroon, Cote d'Ivoire, Ethiopia, Ghana, Mozambique, Tanzania, Uganda, Zambia. Objective

Sustainable African Cotton for a global Textile Industry.

Overview

Cotton made in Africa is an initiative of the Aid by Trade Foundation (AbTF) that helps African smallholder cotton farmers to improve their living conditions. Growers must meet core environmental and social requirements for their cotton to qualify as CmiA.



Fiber Production (2017/18) 578,562 mt

Growth in Production

Claim of 20% average yield

(2016/17-2017/18)

↑17%

Yield

increase



Market Share of Total Cotton Grown (2017/18)

2.17%



Fiber Production Projected to Increase?

Yes. Estimates show 593,067 mt and 1,656,998 ha in 2018-19.



100% rainfed

Initiative data is referenced to Textile Exchange Preferred Fiber & Materials Market Report 2018 which is sourced from and verified by respective initiative.

The market share indicated in this page is initiative dependent and may differ from what is outlined in Global Preferred Cotton Market due to overlapping programs between initiatives (i.e. CmiA covers organic).

Cotton made in Africa

LCA Availability

Yes - PE International (2014a).

Water Consumption:

1 m³ / 1,000 kg fiber (~100 percent reduction - LCA).

Primary Energy Demand: No LCA data.

Global Warming:

1,037 kg of CO_2 -eq / 1000 kg fiber (43 percent reduction - LCA).

Eutrophication:

20.4 kg of phosphate-eq / 1000 kg fiber (431 percent increase - LCA).

Please note: LCA used default values for erosion rates and nutrient content of the soils due to lack of specific data. It can be assumed that eutrophication in reality is significantly lower that calculated.

Water Management

CmiA farmers practice rainfed agriculture exclusively. This means they do not use any artificial irrigation.

Soil Fertility

Farmers receive training to improve agricultural practices, particularly soil and water conservation. Composting and manure are encouraged while crop rotation is mandatory.

Biodiversity

Destruction of primary forest (or other designated resources protected by national or international law) for the purpose of cotton production is prohibited.

GMOs Permitted?

No.

Use of Hazardous Pesticides

The use of organic pesticides is encouraged. Promotes bio-intensive IPM and excludes pesticides banned under the Stockholm Convention on Persistent Organic Pollutants (POPs), the WHO list of highly hazardous and hazardous pesticides, and pesticides listed in the Rotterdam Convention on PIC.

Use of Synthetic Fertilizer

Excessive use of fertilizers not an issue in CmiA's growing regions; IPM, organic manure and compost pits encouraged.

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Production must comply with labor standards as set by the ILO. CmiA standard includes farm as well as gin level criteria. Social project investment with AbTF and retail partners/cotton companies.

Verification / Certification (farm level)

Self-assessment and 3rd party verification on field and gin level.

Chain of Custody (supply chain)

Mass Balance from spinning mill onward (hard identity from field to spinning mill); full traceability possible through Hard Identity Preserved (option).

Product Marketing / Labeling

Consumers can easily recognize CmiA through woven labels and hangtags on the textiles as well as other communication material used by retailers and brands.

Consumer Recognition

13 percent awareness among German consumers (measured Aug 2016).

Livelihoods

No price differential for farmers but the volume-based fee paid by brands/retailers is reinvested in the Foundation's activities, e.g. farmer training, verification, community projects, etc.

Cost Implications / Impacts

No membership fee but retailers/brands pay a volume-based fee and spinning mills pay a small annual registration fee.

Quality Perception / Implications

No known quality implications.



CmiA chats with cotton farmers Sabina and Paul



The cotton business is tough. Farmers in rural Africa have to face hard physical work, low access to training and inputs and are strongly affected by the consequences of climate change.

Two out of the 800.000 farmers CmiA is cooperating with are Sabina and Paul – a cotton farming couple from Tanzania. Sabina and Paul grow cotton on their small farm together. They only had the chance to finish primary school. What helps them a lot on a daily basis are the agricultural trainings CmiA is offering farmers in close cooperation with the local cotton company Alliance. Thereby they learn about new and sustainable cultivation methods and techniques that help them improve their yields and income. The trainings are led by an extension officer who trains a small group of farmers on a regular basis on different aspects of cotton farming and beyond. During their trainings Sabina and Paul also learned about the bio-pesticides: "At the beginning we were wondering if it really works. But now, we are very happy with it", they said and added satisfied "with the help of bio-pesticides we were able to protect our cotton better against pests and thus harvest more cotton at the end of the season than the year before." Asked about what they wish for their son Johann, they said: "We want our children to learn more than we did. We hope for our son Johann that he can become a teacher at school."



Photo: Martin J. Kielmann / CmiA

Fairtrade



@ fairtrade.org.uk/Farmers-and-Workers/Cotton

Fairtrade (FT) is a global movement to support small-scale, marginalized farmers and workers in developing countries, changing the way trade works through better prices, decent working conditions, and an overall fairer deal.

Fairtrade standards require farmers to organize into democratic producer organizations and to have environmentally sound agricultural practices. In return, they are guaranteed the Fairtrade Minimum Price, which provides an important safety net, as well as a Fairtrade Premium. The producer organizations democratically



decide how they want to use the Fairtrade Premium, and it generally goes toward community development.

Fairtrade has stringent social criteria ensuring freedom from discrimination, forced and compulsory labor, child labor, freedom of association and collective bargaining.

Fairtrade cotton production reached 17,997 mt in 2016/17, of which 17.65 percent was also certified to an organic standard. GMOs are banned in the Fairtrade standard.

Producing Countries

India, Kyrgyzstan, Tajikistan, Burkina Faso, Mali, Benin, Senegal, Uganda, Egypt

Objective

To make trade fair, empower small scale producers and workers and to foster sustainable livelihoods.

Overview

Fairtrade changes the way trade works through better prices, decent working conditions and a fairer deal for farmers. The Fairtrade standards require farmers to organize in democratic producer organizations and environmentally sound agricultural practices. It ensures the Fairtrade Minimum Price and Fairtrade Premium.



Growth in Production (2016/17-2017/18) 46%

Market Share of Total Cotton Grown (2017/18) 0.06%

Yield

Yield increases recorded. Dependent on rainfall as most Fairtrade cotton is rainfed.

to Increase? Yes

Fiber Production Projected



Rainfed / Irrigated

Predominantly rainfed (75% in 2015)

Initiative data is referenced to Textile Exchange Preferred Fiber & Materials Market Report 2018 which is sourced from and verified by respective initiative.

The market share indicated in this page is initiative dependent and may differ from what is outlined in Global Preferred Cotton Market due to overlapping programs between initiatives (i.e. Fairtrade covers organic).

Fairtrade



No.

Water Consumption: No LCA data.

Primary Energy Demand: No I CA data.

Global Warming: No LCA data.

Eutrophication:

No LCA data.

Water Management

Promotes efficient and sustainable use of water resources.

Soil Fertility

Encourages improvement of soil fertility through composting, crop rotation and intercropping and reduction/prevention of soil erosion.



Ensures no negative impact on protected and HCV areas and must comply to national legislation on agricultural land use and carry out activities to protect and enhance biodiversity.

GMOs Permitted?

No.

Use of Hazardous Pesticides

Promotes IPM and organic practices. Prohibited Materials List is divided in two: The Red List includes materials that are prohibited, while the Amber List includes materials that are under evaluation for inclusion in the Red List.

Use of Synthetic Fertilizer

Red and amber list of PML (based on POP, PIC, WHO, PAN 12).

Social Considerations / Regulations

Stringent criteria on freedom from discrimination, forced/compulsory labor, child labor, freedom of association and collective bargaining. Operators in the supply chain must comply with ILO core conventions.

Verification / Certification (farm level)

Certification by third party.

Chain of Custody (supply chain)

Two models: Classic: Physically segregated and traceable. Mass balance: Physically traceable until spinner; CoC maintained through supply chain via online tool.



Product Marketing / Labeling

On-product and in-store marketing. Third-party certified (Fairtrade mark).

Consumer Recognition

Fairtrade mark widely understood and trusted by consumers.

K Livelihoods

Farmers paid Fairtrade Minimum Price. Communities benefit from Fairtrade Premiums - spending decided democratically by cooperatives.

Cost Implications / Impacts

Price differential (Fairtrade Minimum Price). Buyers also pay Fairtrade Premium for community investment.

Quality Perception / Implications

Historical perceptions of quality being an issue - but that is less of an issue today.

Organic Fairtrade

Organic Fairtrade (OFT) cotton is cotton that is certified to both Fairtrade and organic standards. Fairtrade encourages organic farming practices and has a higher minimum price for organic commodities. Organic farm standards ensure that the cotton is grown within a rotation system that builds soil fertility, protects biodiversity and is grown without the use of any synthetic fertilizers, hazardous pesticides or GMOs.

With most (93 percent) of OFT participants adopting third-party standards, the sector is performing well in Chain of Custody (86). The sector score for Traceability is relatively strong at 69, with 86 percent of participants able to trace their suppliers of OFT cotton to some degree. Sustainability Investment scored slightly lower at 56. However, with 64 percent of OFT participants making Sustainability Investments in their supply chains, this score was the highest among all modules.

More than two-thirds (71 percent) of OFT participants have a SMART Target driving uptake of OFT cotton and 14 percent are maintaining an OFT-only status (100 percent of cotton usage). The majority, (71 percent) of OFT participants are able to report consumption volumes

OFT leads in Section 4: Consumer Engagement with a sector score of 54.86 percent of OFT participants regard their use of Organic-Fairtrade as core to Establishing Brand Value and communicate/label OFT products. 93 percent of OFT participants engage customers on the benefits of OFT. Calculating ROI (14) is lagging and Monitoring Business Benefits (36) could be improved.







Field to Market



fieldtomarket.org

Field to Market: The Alliance for Sustainable Agriculture is a diverse, multi-stakeholder initiative working to create opportunities across the agricultural supply chain in the U.S. for continuous improvements in productivity, environmental quality, and human wellbeing. The organization provides a common framework for sustainability measurement that row crop farmers and the supply chain can use to better understand and assess performance at the field, local, state and national levels, Field to Market's Supply Chain Sustainability Program helps the agricultural supply chain benchmark sustainability performance, catalyze continuous improvement and enable brands and retailers to characterize the sustainability of key sourcing regions, as well as measure and report out on progress against environmental goals.

The organization focuses on eight key sustainability indicators that are most relevant to U.S. row crop production biodiversity, energy use, greenhouse gas emissions, irrigation water use, land use, soil carbon, soil conservation, and water quality. The associated metrics are science-based and designed to measure environmental outcomes from individual farm fields. The metrics have been developed or adopted by Field to Market through a multi-stakeholder governance process over the past decade.

Farmers can access the sustainability metrics through Field to Market's online Fieldprint® Calculator, a free and confidential tool available to all U.S. row crop producers, or through associated farm-management software that integrates the Platform's metrics and algorithms. Brands, retailers and suppliers can access aggregated data from farmers who opt-in to participate in local projects. The organization has also developed verification protocols that allow companies to make certain kinds of supply chain sustainability claims.

Producing Countries U.S.

Fiber Production (2017/18) No data



Growth in Production (2016/17-2017/18)

No data



Participating farmers input their individual yield data.

Objective

Convenes diverse stakeholders to work collaboratively to define, measure and advance the sustainability of food, fiber and fuel production in the United States.

Overview

The Alliance for Sustainable Agriculture is a diverse, multi-stakeholder initiative working to catalyze opportunities across the agricultural value chain for continuous improvements in environmental outcomes. It provides a common framework for sustainability measurement that row crop farmers and the supply chain can use to better understand and assess performance at the field, local, state and national levels. Field to Market's programs helps the food and agricultural value chain benchmark sustainability performance, catalyze continuous improvement and enable brands and retailers to characterize the sustainability of key sourcing regions as well as measure and report out on progress against environmental goals.



No data

Fiber Production Projected to Increase?

No data



Rainfed / Irrigated

Both rainfed and irrigated producers are included in the program. Irrigated fields receive a specific metric on the irrigation water use efficiency of their system.

Initiative data is sourced from and verified by respective initiative.

Field to Market



LCA Availability

No.

Water Consumption:

Individual users report their water use and receive an irrigation metric score; overall industry performance has improved significantly in the U.S. over the past 35 years, documented in our <u>National</u> Indicators Report.

Primary Energy Demand:

Individual users enter their practice information and receive a score of their energy use per unit of yield. Overall industry performance in the US has improved over time.

Global Warming:

Individual users enter their practice information and receive a score of their greenhouse gas emissions (lbs CO₂e) per unit of yield. Overall industry performance in the U.S. has improved over time.

Eutrophication:

Individual users receive a water quality score on four elements - sediment erosion, nitrogen loss, phosphorous loss and pesticide loss - that is calculated based on the fertilizer input, crop chemical input and conservation management practices.



Participating farmers receive metric scores on irrigation water use efficiency and water quality.

Soil Fertility

Participating farmers receive metric scores on the soil carbon and soil erosion implications of their practices; they must indicate whether soil testing is used in determining fertilizer needs.

Biodiversity

Participating farmers receive a biodiversity score for their cultivated fields and other land types on the farm that indicates the potential to support diverse ecosystems. This information is used to educate farmers on opportunities to increase this potential.

GMOs Permitted?

Field to Market is technology neutral. No specific products are prohibited or required.

Use of Hazardous Pesticides

Field to Market is technology-neutral. No specific products are prohibited or required. Participating farmers are subject to all U.S. laws and regulations regarding permitted/ prohibited chemicals and safe handling requirements.

Use of Synthetic Fertilizer

Field to Market is technology-neutral. No specific products are prohibited or required.

နိုင်နိုင်နိုင် နိုင်နိုင်နိုင် Social Considerations / Regulations

Field to Market does not ask questions that replicate regulations in the U.S. and does not have explicit social metrics at the field scale. The National Indicators Report considers industry-wide economic and social indicators.

Verification / Certification (farm level)

Second-party verification is used for project level measurement. Third-party verification is used for projects that make an Impact Claim. The farmer does not apply for individual verification, rather the company wishing to make a sustainability claim applies for process/data verification of results for the farmers in their sourcing project, as a group. This is not a certification system.

Chain of Custody (supply chain)

Product is not physically segregated or physically traced. Two project accounting systems have been enabled for projects that seek to make Impact claims: traditional mass-balance and volume proxy based on production acres.

Product Marketing / Labeling

No consumer-facing labeling or marketing.

Consumer Recognition

No consumer-facing labeling or marketing and no data on consumer recognition at this time.

Livelihoods

No specified price differential or payment requirement for partners, though supply chain partners develop strategies for grower recruitment and retention that may include financial or non-financial incentives that have included direct payment, cost-sharing, financial assistance, and technical or educational assistance.

Cost Implications / Impacts

The supply chain partners typically bear the cost of data collection and analysis and any incentives or assistance provided to participating farmers. The program is free for growers.

Quality Perception / Implications

No known quality implications.





ℰ iscc-system.org

International Sustainability & Carbon Certification (ISCC) is one of the leading certification schemes applied on a global scale for different feedstocks and markets.

The ISCC principles for farms and plantations are a balanced set of ecological and social criteria. They include the protection of biodiverse and carbon-rich areas, good agricultural practices, safe working conditions, compliance with human labor and land rights, compliance with laws and international treaties, and good land management practices that encourage continuous improvement. In comparison, ISCC covers more sustainability requirements than other standards.

They provide full traceability along the entire cotton supply chain from farms and plantations through to the final product. More than 50 ISCC certificates have been issued for cotton, covering both mills and hundreds of cotton farmers.

Each farmer has an average of 3-4 hectares of cotton. The fiber, seedcase and oil are all sustainably produced to strict standards. A changing sample of farmers is visited by an auditor every year. Each cotton mill is audited individually. The greenhouse gas intensity of cotton production and processing is also calculated.

Producing Countries

40 producing countries. ISCC certification is applied in more than 100 countries (including processors and trading/storage).

Objective

ISCC aims to promote the implementation of deforestation free, environmentally, socially and economically sustainable production, as well as the use of certified fiber, food, feed and biomaterials in global supply chains.

Overview

ISCC is applicable to all field crops, including cotton. ISCC ensures that crops are not produced on land with high biodiversity and high carbon stock; good agricultural practices are applied to protect soil, water, and air air, and that human, labor, and land rights are respected. Supply chain traceability is ensured. There are specific approaches to help smallholders. Non-GMO certification and verification of GHG emissions are optionally available.



Growth in Production

(2016/17-2017/18)

No data

No data



Market Share of Total Cotton Grown (2017/18)

0.41%



Yes. Estimates show 137,052 mt and 46.775 ha in 2018-19.



Rainfed / Irrigated

Irrigation is allowed (if permit from responsible authority is available). but no data available.

Initiative data is sourced from and verified by respective initiative.

ISCC





No.

Water Consumption:

Water management plan required minimizing negative impacts on water quality and quantity. Water consumption must be monitored according to water management plan.

Primary Energy Demand:

Energy consumption must be monitored. Fossil fuel reduction and the use of renewable energies, e.g. biofuels, biogas, solar or wind energy, on the farm or plantation are encouraged.

Global Warming:

Efforts are made to reduce fossil energy consumption and thus lower greenhouse gas emissions. Optional use of add-on "Greenhouse Gas Emissions."

Eutrophication:

Fertilizer balance or soil organic matter balance required. Further requirements on sustainable handling and application of fertilizers (e.g. only on absorptive soils, weather conditions, storage, buffer zones to be taken into account).



Best practices to maintain and improve water quality and quantity are applied: 1. Respect of existing water rights 2. Application of good agricultural practice to reduce water usage and to maintain and improve water quality 3. Water management plans for efficient water usage during irrigation, responsible use of organic fertilizers and agrochemicals, waste discharge including annual documentation and monitoring.

Soil Fertility

Improvement of soil fertility is addressed through soil management plans, crop rotation, intercropping, plant spacing etc., avoidance of erosion and compaction through cultivation techniques. Certification add-on "Environmental Management and Biodiversity" available to further support farmers to conserve and improve soil fertility, water, and biodiversity.

Biodiversity

Land use change of land with high biodiversity or high carbon stock, is not allowed (cut-off date January 2008). Requirements to conserve natural resources and biodiversity on cultivation areas are applied. Certification add-on "Environmental Management and Biodiversity" available to further support farmers to conserve and improve soil fertility, water, and biodiversity.

GMOs Permitted?

Yes, but certification of non-GMO also possible. Non-GMO material must be kept segregated from GMO.

Use of Hazardous Pesticides

Safe usage and storage of plant protection products required. Regulations for restrictions on plant protection products available. Chemicals listed in the Stockholm Convention on Persistent Organic Pollutants shall not be applied. Chemicals listed in the WHO 1a and 1b and Annex III of the Rotterdam Convention shall be avoided. Certification add-on "Classified Chemicals" available to ban extremely hazardous chemicals and phase out moderately hazardous chemicals.

Use of Synthetic Fertilizer

Permitted. However, fertilizer balance or soil organic matter balance and integrated pest management are required. Further requirements on sustainable handling, storage and application of fertilizers (e.g. only on absorptive soils, weather conditions to be taken into account). Disadvantageous impacts of synthetic fertilizers (e.g. regarding GHG, energy consumptions) are specifically covered in add-ons "Greenhouse Gas Emissions" and "Consumables."

Social Considerations / Regulations

Compliance with human, labor and land rights, as well as safe working conditions required on farm level, including: core ILO standards (no forced and child labor), no discrimination, freedom of association and bargaining, minimum wage, appropriate facilities and accommodation (if applicable) for workers and their families, etc.

(farm level)

3rd party certification. Physical audit required annually for all individual and group certifications. Sampling possible for group certification of farms. ISCC carries out additional "integrity audits" to check on auditors.

Chain of Custody (supply chain)

Two options possible: physical segregation or mass balance. Book and claim is not allowed.

Product Marketing / Labeling

On-product claims and ISCC logo use is encouraged for certified consumer goods available.

Consumer Recognition

Currently mainly business-to-business, but increasing application of on-product claims and logos for consumer goods and business-to-consumer communication through website, etc.

Livelihoods

A living wage is to be paid which meets at least legal or industrial minimum standard and that are sufficient to meet the basic needs of workers and provide some discretionary income.

S Cost Implications / Impacts

Competitive fee structure for certification.

Quality Perception / Implications No known guality implications.

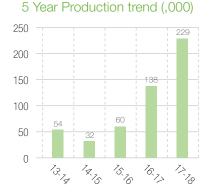
*my*BMP



@ mybmp.com.au

*my*BMP is a voluntary farm and environmental management system which provides self-assessment mechanisms, practical tools and auditing processes to ensure that Australian cotton is produced according to best practice. The original BMP (Best Management Practices) program began in 1997 and was reviewed and redeveloped in 2006-07, with the new online *my*BMP system re-launched in 2010.

myBMP is the industry's assurance mechanism, a best management practice system for growers to improve on-farm production. It attends to the industry's requirement for risk management and supports the industry's social license.



Through *my*BMP, all Australian cotton growers have a resource bank to access the industry's best practice standards, fully supported by scientific research and development, resources and technical support.

By using *my*BMP's tools, growers can improve on-farm production by:

- Better managing business and production risk.
- Maximizing potential market advantages.
- Demonstrating responsible and sustainable natural resource management to the community.

*my*BMP is the result of industry-wide consultation with growers, researchers and industry bodies, taking into consideration the requirements of the cotton industry now and into the future. The initiative is supported by the Cotton Research Development Corporation and Cotton Australia.

Producing Countries

Australia.

Objective

To produce high quality, high-yielding fiber while sustaining the natural environment, people and regional communities.

Overview

The *my*BMP (Best Management Practices) program is the Australian cotton industry's environmental and social standard. To achieve full certification, growers must comply with more than 325 checklist items across 10 modules including soil health, water management, natural assets, pest management, energy efficiency and worker health and safety.





Market Share of Total Cotton Grown (2017/18) 0.86%



Yes, Estimates show 102.721

mt and 57,421 ha in 2018-19.

Rainfed / Irrigated

77% irrigated, 23% rainfed

Initiative data is referenced to Textile Exchange Preferred Fiber & Materials Market Report 2018 which is sourced from and verified by respective initiative. The market share indicated in this page is initiative dependent and may differ from what is outlined in Global Preferred Cotton Market due to overlapping programs between initiatives (i.e. BCI equivalency).

*my*BMP



LCA Availability

No.

Water Consumption:

0.5 m³/MT Irrigation Water Use Efficiency (DPI, 2019). 67 criteria related to water management

Primary Energy Demand:

4,000 MJ / 1,000 kg of lint (on farm only) + 17 criteria in *mv*BMP addressing energy efficiency.

Global Warming:

No LCA data.

Eutrophication:

No LCA data.

Water Management

67 criteria related to water management. From 1992 to 2019, there has been a 97 per cent increase in the bales of cotton grown per megaliter (ML) of water (effective rain and irrigation). This equates to a 48 per cent decrease in the water required per bale of cotton.

Soil Fertility

32 criteria related to soil health including: minimum tillage, crop rotation, soil testing, organic carbon, stubble retention, erosion and salinity prevention, fertilizer efficiency and plant monitoring.

Biodiversity

28 criteria related to sustainable landscapes, including: management of native vegetation and natural assets, improve habitat for biodiversity, assess and monitor native vegetation condition and stock exclusion.

GMOs Permitted?

Yes - regulated and carefully managed.

Use of Hazardous Pesticides

80 criteria related to pesticide management. Since 1993 there has been a 97% decrease in the use of insecticides industry wide and the Australian cotton industry's Environmental Toxic Load (ETL) for bees decreased by 18.2 per cent from 11 to 9 in the four years to 2018. Practices include Integrated Pest Management (IPM), compulsory training, pupae busting, farm mapping, weather monitoring, safe storage and handling.

Use of Synthetic Fertilizer

13 criteria relating to fertilizer efficiency including plant monitoring to assess requirements, pre- and in- season nutrient budgets, monitoring and record keeping.

Social Considerations / Regulations

All Australian cotton growers are subject to high standards by law for fair work conditions, pay, health and safety. myBMP includes 49 criteria related to human resources and worker health and safety including 35 standards required by Australian law.



Verification / Certification

Self assessment, third party verification and certification and spot checks.

Chain of Custody (supply chain)

Physical segregation and tracing possible, unique bar-code identifier on every bale tracking field to spinning mill.

Product Marketing / Labeling

In-store marketing and on-product label (own label or Australian cotton swingtag).

Consumer Recognition

Higher levels of awareness in Australia.

Livelihoods

No price differential paid directly to farmers - farmers paid based on prevailing market price and quality.

S Cost Implications / Impacts

No price differential at point of sourcing; no membership or licensing fees.

Quality Perception / Implications

Consistently very high quality, among the highest in the world across all parameters.

Eloise Bishop Chats With Brooke Summers





Eloise Bishop Head of Sustainability Country Road Group



Country Road shares many values with the Australian cotton industry, particularly when it comes to quality product and the importance of social and environmental sustainability. Our farmers are incredibly proud of the transformation they've made on their farms, and recognition of these efforts from brands like Country Road really drives them to further improve.



What are some of the reasons this partnership has evolved in such an authentic way?

We've always been open and transparent about the industry - its achievements as well as the areas that still need improvement. The Country Road team has been out to the farms they're sourcing from, met the agronomists and researchers that support our work and have a direct relationship with our industry. The leadership team at Country Road is fully committed, which has made a huge difference.



What are some of the biggest

Initiative has had in Australia?

What are you looking forward

We're excited about working with Country

Road to amplify the story of Australian

cotton and its sustainability credentials

to customers. We know that Australian

farmers and we're keen to get into some

on-ground storytelling around technology,

consumers love to support Australian

innovation and impact. And of course,

to help them meet the 2025 Sustainable

impacts the Better Cotton

The program is constantly evolving and the

Australian cotton industry collects industry-

For example, producing a bale of Australia

wide impact data to measure progress.

cotton now uses 48 percent less water,

insecticides (97 percent less) than it did

in giving them confidence to source

to in future?

Australian cotton.

Cotton Challenge!

42 percent less land and a fraction of the

Brooke Summers Supply Chain Consultant Cotton Australia



Photo Credit: Cotton Australia

Focus on *my*BMP: Charm and Tom Arnott

Around 80 percent of Australia's cotton farmers are participating in the industry's *my*BMP (Best Management Practices) cotton certification program. Charm and Tom Arnott are two of the best, recognized this year by winning the 2019 Australian Cotton Grower of the Year Award for their highly disciplined approach to farming and business management. They are committed to a methodical program of continual improvement, which they achieve by measuring and benchmarking every aspect of their operation.

Ensuring farming practices are efficient and sustainable while achieving an increasingly consistent yield year-after-year are key goals. The team are enthusiastic proponents of *my*BMP and believe their accreditation demonstrates a commitment to sustainability excellence for the local community and the whole supply chain.

Could you start by telling us a bit about your farm?

Our family farm is near Goondiwindi on the NSW/Queensland border and covers 1400 hectares where we grow cotton and lots of other crops, mostly under irrigation.

Last season we grew 500 hectares of fully irrigated cotton and 223 hectares of rainfed cotton on a "one in one out" row configuration where cotton is planted only every second row to save water. We are a real team effort, where I (Charm) manage the business and administrative functions and Tom manages the day-to-day farm operations along with 2-3 staff in peak times.

Why do you choose to grow cotton?

Water is our most precious natural resource and our water source is not always reliable due to drought and the ephemeral nature of our rivers. We grow cotton because it gives us the best financial return on the water we do have in this area. When there is no water, we don't plant irrigated cotton which makes it the ideal crop because it's switched on and off depending on conditions.

In terms of sustainability on your farm, what's something you're really proud of?

We are very proud of the high standard of our farming operation and the high quality product we produce. This is through the sustainable treatment of our soils, careful use of our precious water resources, mindfulness around the chemicals we apply, supporting the businesses in our community, contributing to our thriving regional town

What's something you still need to improve?

We do strive to improve to do more with less and find easier solutions to problems. New technology is always on the horizon, making agriculture an exciting space. Our improvement focus is around areas such as adopting precision agriculture and telemetry technologies to improve data collection and improve our farming techniques. Utilizing these technologies for real time management decisions are powerful and exciting tools.

What are some of the benefits of participating in *my*BMP?

One light bulb moment came when I was involved in some cotton industry strategic planning workshops where I found many of the biggest global brands were publicly committing to source cotton only from sustainable sources. That meant we needed to be involved in the Better Cotton Initiative, and that can only be gained from being *my*BMP certified here in Australia. That, and the financial incentives that come with accreditation, was the carrot that we needed to push us the last 10-20 percent of the way to becoming *my*BMP certified cotton growers. Why do you believe sustainability is important?

It is implicit that we all have a responsibility to continue to strive towards improved sustainability, making better use of the natural resources we use and the way we produce cotton. In turn, when I am shopping and buy Better Cotton or Australian Cotton labeled clothing, it is with a sense of pride that at the retail end I am also contributing as a consumer to buy from brands that support our farm gate ethos.

What are some of the important sustainability challenges that cotton is facing at the moment?

We're in the middle of a horrible drought that has seen the Australian cotton crop halve in size for two seasons in a row. A lack of water in turn has sparked emotional debate in the media and this is one of the biggest challenges we face at the moment. A perception that cotton farmers "take all the water" is hurtful to growers and our river communities, because it's simply not true. When there is no water, we don't get a water allocation and we don't plant a crop. This has a devastating impact on our ability to support local town businesses and job creation and makes it hard to maintain our thriving regional community.

MyBMP

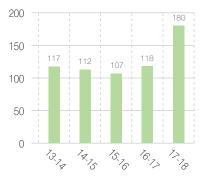
Organic Cotton



textileexchange.org/organic-cotton-round-table

Organic Cotton (OC) is cotton that is produced and certified to organic agricultural standards. Its production sustains the health of soils, ecosystems and people by using natural processes rather than artificial inputs. Importantly organic cotton farming does not allow the use of toxic chemicals or GMOs (genetically modified organisms). Instead, it combines tradition, innovation and science to benefit the shared environment and promote a good quality of life for all involved.

5 Year Production trend (,000)



The Organic Content Standard (OCS) and the Global Organic Textile Standard (GOTS) link the organic agriculture standards for chain of custody forward and provide thirdparty assurance organic product claims. In addition, GOTS includes environmental and social responsibility in processing.

Organic cotton production increased from 107,243 mt in 2012/13 to 117,525 mt in 2016/17.

For more information on organic cotton please see the Textile Exchange Organic Cotton Market Report 2018.

Producing Countries

Argentina, Benin, Brazil, Burkina Faso, China, Egypt, Ethiopia, Greece, India, Kyrgyzstan, Mali, Peru, Senegal, Tajikistan, Tanzania, Thailand, Turkey, Uganda, USA.

Objective

Sustaining the health of soils, ecosystems and people.

Overview

Organic cotton is grown within a rotation system that builds soil fertility, protects biodiversity, conserves water, helps farmers feed their families and is grown without the use of any synthetic chemicals or GMOs. Growers must meet organic agricultural standards as set nationally and by the importing country if export is carried out.

Ø



Yield

others.*

Claim of yield increases recorded

in West Africa, India, Tajikistan and

Market Share of Total Cotton Grown (2017/18) 0.68%

0.00,0

Fiber Production Projected to Increase?

Yes (44,394 ha in-transition in 2017/18)

Rainfed / Irrigated

75-80% rainfed

Initiative data is referenced to <u>Textile Exchange Preferred Fiber & Materials Market Report 2018</u> which is sourced from and verified by respective initiative.

The market share indicated in this page is initiative dependent and may differ from what is outlined in Global Preferred Cotton Market due to overlapping programs between initiatives (i.e. organic covers Fairtrade).

* Dependent on rainfall in rainfed areas, alongside availability of other resources such as training. In-conversion farmers sometimes report a decline as soils stabilize to non-chemical conditions.

Organic Content Standard



Global Organic Textile Standard



textileexchange.org/integrity

Objective

Third party assurance on organic product claims.

Overview

The Organic Content Standard (OCS) is a chain of custody standard that provides companies with a tool to verify that one or more specific input material is in a final product. It requires that each organization along the supply chain take sufficient steps to ensure that the integrity and identity of the input material is preserved.

Producing Countries

47 Countries with Certified units - top 10 are: Bangladesh, India, China, Turkey, South Korea, Japan, Pakistan, Portugal, Sri Lanka, Italy.

Fiber Production (2017/18)

No data



Growth in Production (2016/17-2017/18)

No data





Claim of yield increases recorded in West Africa, India, Tajikistan and others.*



Market Share of Total

Rainfed / Irrigated

75-80% rainfed

global-standard.org

Objective

Third party assurance on organic product claims, including environment and social responsibility in processing.

Overview

The Global Organic Textile Standard (GOTS) is recognized as the world's leading processing standard for textiles made from organic fibers. It defines high-level environmental criteria along the entire organic textiles supply chain and requires compliance with social criteria as well.

Producing Countries

64 Countries with certified units - top 10 are: India, Bangladesh, Turkey, Germany, Italy, China, Pakistan, Portugal, USA, South Korea.



* Dependent on rainfall in rainfed areas, alongside availability of other resources such as training. In-conversion farmers sometimes report a decline as soils stabilize to non-chemical conditions.

Organic Cotton



CA Availability

Yes - PE International (2014b)

Water Consumption:

182 m³/1,000 kg fiber (88 percent reduction - LCA)

Primary Energy Demand:

5,800 MJ / 1,000 kg fiber (58 percent reduction - LCA)

Global Warming:

978 kg of CO_2 -eq / 1,000 kg fiber (26 percent reduction - LCA)

Eutrophication:

2.8 kg of phosphate-eq / 1,000 kg fiber (64 percent reduction - LCA)

Water Management

Organic Standards require effective management of water resources. Increased soil organic matter increases resilience to flood and drought.

Soil Fertility

Effective management of soil fertility is at the heart of organic production, with requirements for crop rotation, soil conservation and soil management. Organic cotton farmers report increases in organic matter (OM). Soil fertility challenges vary from region to region. Studies by FiBL, FAO and Rodale Institute show soil fertility increases on organic farms.

Biodiversity

Organic management maintains or enhances biodiversity in crop and noncrop habitats on farms. FAO and FiBL studies alongside others show increased biodiversity on organic farms.

GMOs Permitted?

No.

Use of Hazardous Pesticides

No use of hazardous pesticides. There are slight variations between the different organic standards regarding the exact pesticides authorized and their conditions of use.

Use of Synthetic Fertilizer

No. Organic production relies on crop rotation and natural inputs such as animal or green manures to build fertility.

နိုင်နိုင်ငံ နိုင်နိုင်ငံ Social Considerations / Regulations

Organic Cotton:

N/A, as they are not required standards for developing countries relating to organic production.

OCS:

OCS does not address social aspects of production beyond the integrity of the organic material. However, to qualify as organic, production must comply with labor standards as set by the ILO.

GOTS:

Minimum social criteria for GOTS is based on the key norms of the ILO, which must be met by all GOTS certified processors and manufacturers.



Certification (annual) by third party.



Identity Preserved; Certification of Supply Chain.

Product Marketing / Labeling

In-store marketing and on-product label. Third-party certification label.

Consumer Recognition

Concept of organic widely understood, trusted and respected by consumers.

Livelihoods

A price differential/sustainable price (i.e. meeting the cost of production and of ecosystem value addition) is expected to occur via market mechanisms and producer group policy, but is not a requirement of the standard. Optional partnership investment via NGOs, corporate investment, and PG investment goes back into the community.

Cost Implications / Impacts

Price differential paid to farmer/producer group.

Quality Perception / Implications

Historical perceptions of quality have been a problem in the past, but are not considered an issue today.

Focus on Organic Cotton: Q&A with Bart Vollaard





Bart Vollaard Executive Director Organic Cotton Accelerator

Can you tell us about OCA?

The Organic Cotton Accelerator (OCA) is the only multi-stakeholder organization fully dedicated to organic cotton. As a global platform, we are committed to bringing integrity, supply security and measurable social and environmental impact to organic cotton. Our programmatic interventions are all focused on creating the conditions for organic cotton to thrive. As a platform, we invest in solutions that nurture a healthy organic cotton sector; from creating a secure market for organic cotton farmers to diagnosing the integrity of organic cotton at farm-level. From investing in guality seed for organic agriculture to exploring technology that enables increased traceability in production and processing. Right now, we're even working on a fund to support the development of high-quality farm projects, which should, in turn, drive an increase in the conversion of conventional farmers to organic.

At OCA, we support farm-level interventions because we believe farmers are the

catalysts for the powerful and positive impact organic cotton can have on people, planet and prosperity. We call this the Organic Cotton Effect. Support the farmer, you strengthen the sector and you safeguard the planet. However, for this positive effect to be fully realized; we need time, a commitment to shift behavior and sustained investment and collaboration across the whole sector. OCA envisions a future where we have fully realized the Organic Cotton Effect. We know this positive effect can't be unlocked overnight, and it certainly won't happen based on our efforts alone. We need allies and advocates to join our movement - which is why we're committed to uniting the sector to unleash the potential of organic cotton, together

Any highlights you'd like to share from 2019?

1) Our global platform scales up: The OCA community now has 28 Contributors spanning brands, retailers, suppliers, farm groups, NGOs, philanthropic foundations and civil society organizations. 2) Growth in farmer numbers: During the 2017/18 season, 1,780 farmers participated in our Farmer Engagement and Development program, which provided them with a secure market and a better price for their organic produce. In the last 2018-19 season, this increased to nearly 12,000 farmers in India.

3) Income benefits to farmers: A real and compelling business case for using organic practices has been demonstrated to farmers; with farmers in OCA projects receiving a premium payment and earning on average 4 percent higher net income from their cotton than conventional farmers in the same region.

4) New cotton cultivars bred: OCA's investment in India's leading organic cotton breeding program, "Seeding the Green Future," has helped strengthen and secure quality cottonseed supply in India for organic agriculture. At least eight new cotton cultivars are currently under development and getting ready for market release.

5) Standardizing the approach to GMO testing: OCA led the development of an international reference protocol for the screening of GMO in cotton and textiles through an ISO International Workshop Agreement (IWA 32:2019, published in April 2019), bringing much needed clarity and a standardized methodology to GMO testing in the organic cotton and textiles sector. The leading Chain of Custody standards in organic textiles from GOTS and Textile Exchange are planning to include the protocol in their next standard revision rounds which will ensure adoption throughout the sector.

6) On-product markers provide opportunities for traceability: OCA was a partner in the Organic Cotton Traceability Pilot, together with Laudes Foundation and Fashion for Good. The pilot tested the use of a unique combination of technologies including blockchain, machine vision, AI, microbiome sequencing and on-product markers for organic cotton to trace and identify the origin, purity and distribution of organic cotton.

What does the future hold?

As a global platform for organic cotton, OCA has a global focus. Our initial interventions began in India as it is by far the largest organic cotton producer in the world. We do have plans to expand our geographic scope in the future and we are currently developing a Global Strategy for 2030 which will enable us to drive continued impact in the sector and bring us even closer to fully unleashing the potential of organic cotton from field to fashion.

Organic Cotton: The Year in Numbers

356,131 ha Organic Certified



FAJIKISTAN 5% USA 3% TANZANIA 3%

2017/18 organic cotton production snapshot

180,871 MT

Organic Cotton

Fiber

44,394 ha In-Transition Land



over 2016/17 Organic Cotton Fiber

PRODUCTION AT ITS HIGHEST IN EIGHT YEARS

+56%

Production of organic cotton declined significantly in 2010/11 in connection with the financial crisis. However, in 2017/2018, organic cotton production reached its highest in eight years.

56% GLOBAL GROWTH IN ORGANIC COTTON PRODUCTION

Global organic cotton production grew by an impressive 56 percent in 2017/18, well exceeding the previous year's growth rate of 10 percent. Estimates indicate that growth will continue next year, stemming predominantly from India, Tanzania, Turkey, Kyrgyzstan and Brazil, among others.

98% GLOBAL PRODUCTION STEMS FROM JUST 7 COUNTRIES

INDIA

47%

*The remaining 12 countries are: Greece (0.5%); Uganda (0.4%); Benin (0.4%); Burkina Faso (0.3%); Peru (0.3%); Egypt (0.2%); Mali (0.04%); Ethiopia (0.02%); Brazil (0.01%); Senegal (0.003%); Argentina (0.001%); Thailand (0.001%)



KYRGYZSTAN 12%

FURKEY 6%

CHINA 21%

INDIA, CHINA & KYRGYZSTAN FUEL GROWTH

India, China and Kyrgyzstan contributed most significantly by volume to this year's global growth. This trend looks set to continue, with the same three countries having the biggest land area in-transition to organic.

					COLLE	ANIC TOC		↑
CI-+	5-16	5-17	7-18		GUDBAL ORC	TEXTING	STAND	1
GI-4102	2015-16	2016-17	2017-18					

16%

15%

2013-14

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CERTIFIED FACILITIES ALSO ON THE RISE

Not only are production volumes growing, so are the number of facilities certified to voluntary organic standards around the world.

TOP FIVE BY FIBER GROWTH RATE

Argentina +300% Kyrgyzstan +178% China +71% Turkey +51% Peru +49%

TOP FIVE BY FIBER VOLUME INCREASE

India + 26,060 MT China + 16,138 MT Kyrgyzstan + 14,290 MT Turkey + 3,911 MT Tajikistan + 2,594 MT

TOP FIVE BY IN-TRANSITION LAND AREA

India	25,237 ha
Kyrgyzstan	9,100 ha
China	3,669 ha
Turkey	2,439 ha
Tanzania	1,297 ha



Global Organic Cotton Production

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1 Please note that this stakeholder map is a work in progress and is not an exhaustive list. Please also note that it does not currently include organic cotton producers. If you have suggestions for amendments or additions, please send to: Materials@TextileExchange.org.

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Recycled Cotton



textileexchange.org/integrity

Recycled Cotton (rCotton) has been reprocessed from reclaimed cotton. The Recycled Claim Standard (RCS), the Global Recycled Standard (GRS) and the SCS Recycled Standard are Chain of Custody standards to track the use of recycled material through the supply chain. The GRS, in addition, includes social and environmental requirements that must be met during the processing stages.







~12.5% of the global fashion market committed to



LCA Availability

Yes - F.A. Esteve-Turrillas and M. de la Guardia (2016).

Water Consumption:

Zero water consumption.

Primary Energy Demand: 1,440 MJ / 1,000 kg of fiber.

Global Warming: 100 kg of CO₂-eq / 1,000 kg of fiber.

Eutrophication: n/a

Water Management:





Biodiversity:

n/a



Potential for GMOs to enter supply chains through feedstock as a result of over 80 percent conventional cotton being genetically modified.



Chain of Custody (supply chain) Global Recycled Standard.

Product Marketing / Labeling In store and on-product marketing.

Consumer Recognition

Primarily B2B but in-store marketing.

A Livelihoods:

n/a

Cost Implications / Impacts

Cost absorbed / Co-op promo concepts.



No known quality implications. Some limitations in color variety due to mechanical recycling.

The LCA data has been contributed by Recover

Recycled Cotton

A closer look at recycled cotton

The Ellen MacArthur Foundation estimates that less than 1 percent of all clothing is recycled back into clothing. At the same time, around 12.5 percent of the global fashion market has made a public commitment to circularity by signing the <u>Circular Fashion System</u> <u>Commitment.</u>

The recycling of cotton is one approach toward a more circular textile industry. Recycling of cotton can either be done mechanically or chemically. Please note that with chemically recycled cotton, the end result is a "manmade cellulosic," not a "cotton."

Collaboration is key in order to increase the transition to recycled cotton. A number of initiatives are working to support this goal.

Examples:

Textile Exchange supports recycled cotton by providing information through it's annual Market Reports, publications such as the Material Summaries, the 2025 Sustainable Cotton Challenge, and focus sessions at its annual conferences, among other approaches. Textile Exchange also works with <u>Accelerating Circularity</u> as a knowledge partner. The Alliance for Responsible Denim brought together representatives from the entire denim value chain in a precompetitive collaboration to make the denim industry smarter and cleaner. Circle Economy, MADE-BY, and the Amsterdam University of Applied Sciences joined forces to convene the Alliance for Responsible Denim (ARD) and drive the project forward. Circle Economy led the post-consumer recycled (PCRD) working group, with the ambition to stimulate the adoption of PCRD in the market and grow demand. Over 20 brands were trained on post-consumer recycled denim and standardized PCRD fabric briefs were developed according to their needs. These briefs were translated by 10 global denim mills, 2 yarn suppliers and 4 recyclers into 40 PCRD styles, with a recycled content of 7-40 percent, for the participating brands to integrate into their collections.



Recycled Cotton: Evrnu

∂ evrnu.com

Objective

Regenerating cotton waste to create premium, renewable fiber for apparel, home and industrial applications.

Overview

Evrnu purifies cotton garment waste, converts it to a pulp, and extrudes it as a pristine new fiber for the creation of premium textiles. Their process can create engineered fibers with a wide range deniers, shapes, and properties. The Evrnu process creates very little negative environmental impact. Pre-commercial bench scale -prototype garments produced.

Producing Countries

USA.



Manufacturing Process

Chemical post consumer cotton recycling.



Growth in Production (2016/17-2017/18)

TBD (pre-commercial)



TBD (R&D stage)



TBD (pre-commercial)

LCA Availability $\begin{pmatrix} 4 \end{pmatrix}$

Preliminary LCA performed but technology is still in R&D.

Water Consumption:

Minimal - bench scale achieved tens of gallons of direct water use/ kg fiber.

Primary Energy Demand:

TBD (Pre-commercial). Preliminary data indicates that Evrnu pulping takes less energy than wood pulping. Fiber energy demand varies by solvent systems (ex: viscose, lvocell).

Global Warming:

TBD (pre-commercial). Preliminary results of est. -1000 kg CO_e/ton pulp at lab scale when made with US textile waste, projected to reach -2000 kg CO₂e/ton pulp.

Eutrophication:

n/a

GMOs Permitted?

Potential for GMOs to enter supply chains through feedstock as a result of over 80% conventional cotton being genetically modified.

EV

Chain of Custody (supply chain)

Technology is compatible with an embedded fiber tracer to ensure chain of custody and facilitate end-of-life recycling.

Product Marketing / Labeling

TBD (pre-commercial)

Consumer Recognition

TBD (pre-commercial)

Cost Implications / Impacts

n/a

Quality Perception / Implications

Can yield higher quality fibers from low quality cotton input, with custom length, composition, and shape. Can exceed wood fibers in quality.

Recycled Cotton: Re:newcell

re:newcell

e renewcell.com e circulo.se

Objective

To lead the way to a sustainable world by producing high quality products from recycled textiles.

Overview

Re:newcell's textile recycling technology transforms a high cellulosic portion fabric into high quality recycled dissolving pulp, branded as Circulose(R). The process does not require any environmentally harmful chemicals, and the Re:newcell pulp can be fed into the commercial textile production chain. Commercially active in industrial scale since 2019. First product launched in retail in March 2020.

Producing Countries

Sweden.



Manufacturing Process Chemical cellulosic recycling.



Growth in Production (2016/17–2017/18)

No data.



Preliminary - SCS Global Services (2017).

Water Consumption: TBD: 5 m³ / 1000 kg pulp.

Primary Energy Demand: TBD: Recycling plant runs on 100% renewable energy.

Global Warming: TBD: -2000 kg CO₂e per 1000 kg fiber

Eutrophication:

n/a



Manufacturing Location Kristinehamn, Sweden,

Fiber Production Projected to Increase?

4500 ton/year production pace in 2020. 60000 tons/year by 2025.

GMOs Permitted?

Potential for GMOs to enter supply chains through feedstock as a result of over 80% conventional cotton being genetically modified.

Chain of Custody (supply chain)

Preparing for GRS, finalized second half of 2020

Product Marketing / Labeling Circulose® (product brand).

Consumer Recognition

Large B2B recognition and growing consumer awareness. First garments in store in March 2020.

Cost Implications / Impacts

Cost competitive to conventional MMCF.

Quality Perception / Implications

Physical characteristics are equal or higher than fibers made from virgin material.

Recycled Cotton: Recover



Objective

To help facilitate Closed-Loop manufacture and a zero-waste industry.

Overview

Recover® produces Mechanically Recycled Cotton Yarns. Recover® is known for offering the finest gauges, consistent quality, and precise color control. Recover® cotton is blended into accurate colors lot to lot without any dyestuffs applied to cotton fiber. Recently published LCAs indicate significant water, energy, chemical and CO₂ savings.

Producing Countries

Spain.



Manufacturing Process

Mechanical cotton recycling, blending and spinning yarns.



Growth in Production (2016/17-2017/18)

No data.



Banyeres Di Mariola, Alicante Spain.

Fiber Production Projected to Increase?





Yes - F.A. Esteve-Turrillas and M. de la Guardia (2016).

Water Consumption: Zero water consumption.

Primary Energy Demand: 1440 MJ /1000 kg fiber (LCA).

Global Warming: 100 kg of CO₂-eq/ 1000kg fiber (LCA).

Eutrophication:

n/a

GMOs Permitted?

Potential for GMOs to enter supply chains through feedstock as a result of over 80% conventional cotton being genetically modified.

 \rightarrow Chain of Custody (supply chain) GRS.

Product Marketing / Labeling In store and on product marketing.

Consumer Recognition

Primarily B2B but in-store marketing.

Cost Implications / Impacts

Cost absorbed / Co-op promo concepts.



Quality Perception / Implications

No known quality implications. Some limitations in color variety due to mechanical recycling.



Recycled Cotton: TENCEL[™] Lyocell fibers with REFIBRA[™] technology



elenzing.com

Objective

Lenzing's contribution to drive circular economy solutions in the textile industry.

Overview

Pioneering REFIBRA[™] technology uses a substantial portion of cotton scraps and the closed loop fiber production process to produce new virgin TENCEL[™] x REFIBRA[™] lyocell fibers. REFIBRA[™] use innovative special identification technology to confirm fiber origin and improve supply chain transparency. Fiber is globally commercial available and garments in store at different brands.

Producing Countries

Austria.



Manufacturing Process Chemical cotton recycling.



Growth in Production (2016/17–2017/18)

1400%



Fiber Production Projected

Manufacturing Location

Austria.

Follow the market (up to several thousand tons).

LCA Availability

LCA is in progress.

Water Consumption: Minimal due to closed loop fiber production process.

Primary Energy Demand: No current data.

Global Warming: No current data.

Eutrophication:

n/a

GMOs Permitted?

Potential for GMOs to enter supply chains through feedstock as a result of over 80% conventional cotton being genetically modified.

Chain of Custody (supply chain) RCS.

Product Marketing / Labeling

TENCEL[™] x REFIBRA[™] at POS and through supply chain.

Consumer Recognition

Messaging via hangtags, website, social media, POS.

Gost Implications / Impacts

Competitive considering high innovation degree.

Quality Perception / Implications

Quality and performance proven as the same high level as TENCEL[™] lyocell fibers made from virgin material

Recycled Cotton: Worn Again Technologies



@wornagain.co.uk

Objective

To replace the use of virgin resources by recapturing raw materials from non-reusable products.

Overview

Worn Again Technologies has developed a textile-to-textile polymer recycling technology to separate, decontaminate and recapture polyester and cellulose from cotton from end of use textiles and PET plastics to be reintroduced into the supply chain as new, virgin equivalent raw materials. Pre-commercial, scaled up to pilot plant phase.

Producing Countries

UK.



Manufacturing Process

Separation, decontamination and extraction of PET and cellulose.



Growth in Production (2016/17-2017/18)

TBD (R&D stage).



Manufacturing Location

Lab (Nottingham), Pilot Plant (Redcar), UK.



Fiber Production Proiected to Increase?

TBD (pre-commercial).

$\begin{pmatrix} \mathbf{z} \\ \mathbf{z} \end{pmatrix}$ LCA Availability

Preliminary LCA performed but technology is still in R&D.

Water Consumption: TBD (R&D stage).

Primary Energy Demand: TBD (R&D stage).

Global Warming: No data.

Eutrophication:

n/a



Potential for GMOs to enter supply chains through feedstock as a result of over 80% conventional cotton being genetically modified.

Chain of Custody (supply chain)

TBD (pre-commercial).

Product Marketing / Labeling No data.

Consumer Recognition

Primarily B2B. Works closely with end of use textile supply chain, brand partners and their supply chains and future plant operators.

Cost Implications / Impacts

Goal of low cost industrial process to enable competitiveness with virgin or equivalent 'circular' raw materials.



Goal to be comparable to virgin raw material specifications.

REEL Cotton



e cottonconnect.org

The REEL Cotton Program is

CottonConnect's three-year agricultural program providing farmers with training on sustainable cotton farming practices. The REEL Code is used to verify that farmers in the REEL Cotton Program are using those sustainable practices, with additional program elements that ensure traceability and decent working conditions.

REEL, as one of the newest sustainability programs, has the lowest participation rate of all pCotton modules, and has a sector score of 46 for Section 2: Supply Chain. The sector is performing reasonably in Chain of Custody (40), Traceability (50) and Sustainability Investment (50). Consumption (13) is the lowest within the pCotton modules. None of the REEL participants reported consumption data, and SMART Targets are not generally in place.

Consumer Engagement is an untapped area for REEL Cotton. REEL participants are not carrying out the full extent of consumer engagement activities. Product Marks and Labeling (13) was the one area of activity with participants communicating REEL Cotton usage on company websites and in corporate reports.

REEL cotton production was 29,997 mt in 2016/17.

Objective

To create more sustainable, traceable cotton.

Overview

The REEL Cotton Program is a three-year modular program for farmers with Sustainable Agricultural Practices (SAP) at its core. It has four key focus areas:

- Agronomic training.
- Social mobility and engagement.
- Supply chain verification.
- Brand reputation.

Fiber Production (2017/18) 20,188 mt



Producing Countries

China, India, Pakistan.

Growth in Production (2016/17–2017/18) ↓33%

XXXX	

Yield

9.4% average yield increase among REEL farmers compared with control farmers.

Market Share of Total Cotton Grown (2016/17) 0.08%



Yes. Estimates show 63,326 mt and 68,313 ha in 2018-19.





Initiative data is referenced to <u>Textile Exchange Preferred Fiber & Materials Market Report</u> 2018 and further updated and verified by respective initiative in January 2019.

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REEL Cotton

LCA Availability

Water consumption; Primary energy demand; Global warming; Eutrophication

Note: No LCA data available this year; however, CottonConnect is conducting a pilot to measure LCA factors.

Water Consumption: No LCA data.

Primary Energy Demand:

No LCA data.

Global Warming:

No LCA data.

Eutrophication:

No LCA data.

Water Management

Promotes water efficiency. 12.5 percent average reduction in water use compared with control farmers. The REEL Cotton Code requires water used for irrigation of cotton fields stems from sustainable sources and is safe for crop, soil and human health. Farmers are encouraged to adopt measures to optimize water use for irrigation and adopt water resource recharging practices.

Soil Fertility

Promotes soil health and nutrient management through crop rotation and composting. REEL Code requires appropriate measures are implemented to increase soil fertility and avoid erosion of the soil.



Promotes the use of bio-pesticides and biofertilizers and reduces the use of chemical pesticides and fertilizers. The REEL Cotton Code requires cotton production to respect ecologically sensitive areas by keeping sufficiently sized buffers around cotton fields. Farmers are motivated to plant trees around farms; diversify their production system through crop rotation and intercropping; plant border crops around the cotton field; and take necessary steps to increase beneficial insects on the farms.

Note: CottonConnect is conducting a pilot to measure biodiversity and soil health improvements.

GMOs Permitted?

Yes.

Use of Hazardous Pesticides

REEL farmers are trained in pest management and reduction of harmful chemical use. Training is provided on organic pesticides (e.g. neem spray). Use of chemical pesticides reduced on average by 17.1 percent compared with control farmers.

Use of Synthetic Fertilizer

REEL farmers trained in composting, crop rotation and reduction in use of chemical fertilizers. Use of chemical pesticides reduced on average by 12.7 percent compared with control farmers.

Social Considerations / Regulations

Provides training to produce cotton with respect for human rights principles for decent working conditions; no child labor; application of health and safety principles; gender inclusion. Focus on women empowerment through Women in Cotton program.

Verification / Certification (farm level)

Developed and verified by Flo-Cert (third party).

Chain of Custody (supply chain)

CottonConnect has developed a product called TraceBale, providing traceability from the source of cotton to the finished product. The software tool uses a TraceBale ID to provide visibility of the cotton from the farmers to ginners, and connecting into existing yarn ID systems to provide traceability throughout the supply chain.



REEL Cotton products can be labeled as REEL Cotton or using a brand's own label for sustainable cotton.

Consumer Recognition

Primarily business-to-business but in-store marketing.

Livelihoods

REEL farmers receive training to increase yield and profit. 7.3 percent average profit compared with control farmers. In addition to agronomic training, REEL Cotton programs improve livelihoods through the social intervention programs including "Women in Cotton," "Farmer Business School" and "Health and Safety in Cotton Gins."

S Cost Implications / Impacts

Brand/retailer pays for service.



No known quality implications.





Regenerative Organic Cotton



@www.regenorganic.org

What's the buzz on Regenerative Organic Certified cotton?

Whole Foods just named regenerative farming the biggest trend for 2020, with Company President A.C. Gallo stating that this year, the grocer giant will "spend a lot of time and energy looking into... how to move regenerative agriculture forward." The concept has been featured in the pages of Forbes, Vogue Business and Outside Magazine, among many others. It seems nearly everyone-from businesses and brands to policymakers, consumers, and activists-are interested in regenerative organic farming and its potential to fight the climate crisis. It's a thrilling time, and the energy is palpable. The whole world is pivoting toward this conversation and the realization that regenerative organic agriculture has the ability to solve some of humanity's biggest problems.

Importantly, there is specific interest around regenerative textiles. Conventional cotton is notoriously harmful. One of the most chemical-intensive crops, it's been implicated in water shortages and destruction of native soils, not to mention its egregious history of forced labor. As brands jump to decrease their footprint and appeal to consumer values, sustainably grown and harvested cotton is the obvious choice with mainstream companies like Walmart investing in building more sustainability into their cotton supply chain. Regenerative organic cotton is the "north star" of this critical sector and quality driven brands clearly recognize it.

In 2018, the Regenerative Organic Alliance created the Regenerative Organic Certification (ROC). ROC is a holistic, high-bar certification for food, fiber, and personal care products. The certification encompasses three pillars-soil health, animal welfare, and social fairness-all of which affect and touch on each other. Like USDA Organic, ROC prohibits synthetic inputs like fertilizers, herbicides, and insecticides and prohibits the use of GMOs. What's more, ROC requires farmers to actively build soil health and organic matter on their land, conserve water, reduce soil disturbance, build habitat, provide fair and comfortable working conditions, and more. ROC addresses the full range of issues that plague conventional cotton, like intense water use, soil degradation, and unfair labor practices.

Increasingly, consumers want to be connected to the source of their food and products, and they want those sources to be authentic and sustainable—regenerative, if you will. As witnessed in the growth of organic, consumers are willing to pay a premium to buy in line with their values. With climate uncertainty at an all-time high, consumers value products that were made in a planet-friendly way more than ever. But with so many claims on the market, they need assurance at a glance that their dollars are well-spent. That's where labels like Regenerative Organic Certified come in.

ROC is unique because it represents a full suite of values that extend beyond food, guaranteeing that the land, animals, and people involved in creating a product were all treated with respect. ROC is a promise to consumers that their purchase makes a positive impact.

In 2019, ROC underwent its Pilot Program. The Regenerative Organic Alliance conducted audits on over 20 farms around the world, testing the first version of the ROC standards against real-life conditions on real farms. Armed with that information, they will fine-tune the standards and design training materials to help others on the journey to Regenerative Organic Certified.

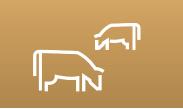
Regenerative Organic Certification will be open to general applications in spring 2020. As its network of farmers grows, the opportunities for regenerative organic cotton are exciting.

Learn more at regenorganic.org.

The Three Pillars Of Regenerative Organic Certification



Soil Health



Animal Welfare



Social Fairness

Q&A with Elizabeth Whitlow





Elizabeth Whitlow Executive Director Regenerative Organic Alliance

What were the biggest challenges of the Pilot Program?

Our biggest challenge was time and scheduling! Certifiers are under-resourced. Auditors are extremely busy. Working on an international scope compounded the difficulties.

As expected, we learned that the Regenerative Organic Alliance (ROC) standards will need to be adjusted to accommodate farms in disparate geographic conditions and climates. Some agricultural practices are highly site-specific, and there is definitely no one-size-fits-all solution for every farm.

What were the biggest takeaways?

An important takeaway was something we knew going in: the standards weren't written into perfection, and they will need to be continually updated as we learn more from farmers globally. There is so much nuance

in farming, as in life. We don't have all the answers. What we do have is a willingness and dedication to working hand-in-hand with farmers on the ground to come up with solutions.

For this movement to reach its full potential, we need more farmers practicing regenerative organic who can, in turn, help other farmers adopt these methods. Farmers operate under the thinnest imaginable margins and need the brands who rely on them to support and invest in shifting the paradigm. This movement is global, but to make it successful, we need to think regionally and get people on the ground applying the ideas to the unique context of each farm.

> Do you see interest from the textile and fashion industries in regenerative organic practices?

There's tremendous interest around sustainable textiles right now. Fashionista recently wrote a deep-dive article on regenerative agriculture and fashion.

and Vogue Business wrote a two-part series on the subject, too. The Outdoor Retailer Expo 2019 was telling—one look around the room and you could see that brands are heavily invested in recycled, organic, salvaged, and other kinds of sustainable goods because that's what their demographic demands. Everyone is jumping on the bandwagon. And some of these brands are huge manufacturers of clothing-this is a sector that has potential to make a big impact.

What is the future for

regenerative organic cotton?

As is the case with a lot of organic cotton, demand outstrips supply. We need to increase awareness among farmers about regenerative organic practices, not only so they can put these amazing climatefriendly methods to work, but so that they can capture the higher premiums that regenerative organic products demand for themselves and their communities.

Acquiring suitable seeds is an issue—it's extremely difficult to find non-GMO cotton seed, which ROC requires. The strong push for more sustainable textiles should help tip that trend. Another concern in growing the supply chain is social fairness. It's expected that, to fill the gap in demand, smallholder cotton production will increase. Without protection, those small-scale farmers are

vulnerable. To protect them, ROC brands and buvers are held to a high standard only a certification like ROC ensures that farmers are paid a fair premium while also ensuring that natural resources are conserved. We think that dual approach matters. Consumers do, too. For brands, having the ROC logo on their cotton product sends a strong signal to consumers that no one was harmed in the making of the clothing-neither soil nor farmer.

As for ROC and the future of cotton, once we get our database up and running, we'll have a way for interested parties to search for ROC certified farmers. We hope to have that by the end of 2020.



By Q2 2020, we'll have adjusted the framework and will begin accepting general applications. Shortly after, of course, we'll start officially certifying farms. It's an exciting time!

Transitional Cotton



The demand for, and the benefits of, organic agriculture are clear. Evidence of the positive role organic agriculture plays to address biodiversity and regenerative properties is a cornerstone solution to address the climate crisis. This means that supporting organic production by incorporating organic fiber into textile programs is more important today than ever.

A Rodale Institute <u>study</u>, which looked at farming systems and pasture trials, claimed farmers could capture up to 100 percent of current annual global carbon emissions through organic farming using regenerative organic practices. In addition, a <u>study</u> by The Organic Center demonstrated that organic farms store more carbon in the soil than conventional ones and keep it out of the atmosphere for longer than conventional farming methods.

One of the greatest opportunities for increasing the supply of organic cotton (and other fibers) lies in programs that support farmers along their journey to organic certification by providing labeling-based incentive programs during the transitional period. These programs also provide verification of claims permitted along the supply chain from field to finished product, distribution of premium pricing from retailer to farmer, increased financial stability for farms during the transition, and increased education and understanding as to how to attain, and retain, organic certification.

The process of transition:

Transitional (also known as "in-conversion") agriculture is farming that shifts land from conventional practices to an organic management system until it qualifies to be certified organic under national or international organic standards.

That transitional process usually takes place over a 36-month (three year) period. It can take only one year if no substances prohibited in organic agriculture have been used during the preceding year. During those three years, certification bodies conduct annual audits as per international organic farming standards. The goal is that transitional farms become certified to organic standards after their third year and become fully certified organic.

Organic farm standards are developed nationally but transitional farming and labeling requirements may differ slightly between nations and even individual certifiers.

Standards that support transitional organic fiber production

There are several standards in place to support the conversion of land from transitional to organic production. These are managed by state or national authorities as well as private certifiers. Internationally, transitional organic standards are in place in the top organic cotton producing nations of India, China, and Turkey as well as other leading producer countries. In the United States, both CCOF and Quality Assurance International (QAI) offer transitional programs as do numerous state agencies such as the Texas Department of Agriculture, located in the primary U.S. organic cotton growing region.

Standards that support transitional organic fiber in finished products

International textile processing standards also support the creation of a transitional supply chain from field to finished products. The leading organic textile standards - the <u>Global Organic Textile Standard</u> (GOTS) and Textile Exchange's <u>Organic Content</u> <u>Standard (OCS)</u> - permit both certified organic cotton and "in-conversion" cotton in finished products with appropriate labeling.

Where is transitional cotton grown?

According to the Textile Exchange 2019 Organic Cotton Market Report, there were almost 44,000 hectares of transitional cotton grown in 2017/18, led by countries in South Asia (25,242), the Middle East and Central Asia (12,840), China (3,669), Africa (1,712), Latin America (627), and the United States (304). Textile Exchange, in partnership with Kering, is developing a **Transitional Cotton Roadmap** which will be made available soon. The Roadmap aims to support the sustainable growth of the organic cotton sector. It builds on the earlier work delivered through this partnership and provides a robust business model that benefits people and planet.



Bergman Rivera Supports Transitional Cotton

Our support to transitional cotton farmers has been fundamental for the growth and success of Bergman Rivera, as this is where it all starts. In order to become an organic farmer, the soil needs to cleanse during three years. During this period of time, farmers have to adapt to a new way of farming, eliminate pesticides, insecticides, chemical fertilizers, among others. Their yields initially go down and their cotton is sold as conventional, as it is not yet organic, thus they don't get a premium.

During 30 years, we at Bergman Rivera have assumed that additional cost, as this is the only way to promote the transition to organic farming. That three year cost has then to be translated to the organic cotton price, making the price difference be even higher.

Three years ago, we started working directly with brands, helping them understand that the only way to secure the future growth of organic cotton is by assuming part of the investment cost of growing the organic farmed area. They understood that the easiest way was through them starting to purchase transitional cotton for what it is and not conventional.

Transitional cotton is more sustainable than other options out there in the market and in the second year of cleanse it is GOTS certified, which offers a great opportunity. Labeling and language behind transitional cotton still needs work, in order for the final consumer to understand why this is a preferred fiber.

During the last year, we have been offering transitional cotton to new clients, which are just starting their journey to sustainability. For us promoting it has not been that hard, as it is a stepping stone towards a better and more responsible supply chain and better livelihood for the farmers that are starting their path to organic agriculture.

Currently 37 percent of the farmers in our project are part of the Transitional Cotton Program and our forecast is to grow 30 percent each year.

The most interesting fact is that on 2019 we reported sales growth of 230 percent, just by offering Transitional Cotton to some of our most committed partners and new clients. We believe that if we have a common message among all the players involved and provide data that the brands can leverage, this is a great opportunity to increase organic cotton areas among the world.

It is our duty as producers and Textile Exchange Board Members to encourage brands and lead them to choose wisely when they think of preferred cotton alternatives.

Even though we have long term and strong relationships with the farmers we work with, we need to promote better farming practices in the areas where they operate. Why promote better farming practices? Because we have seen a real impact on people's wellbeing, besides that is a way to protect the environment. Also, it is important for us to maintain a healthy farming tradition with younger generations.

By implementing transitional cotton programs, we can achieve all the mentioned above, and that is why encouraged our most important clients to start using transitional cotton as they grow their demand of organic cotton each year, that way they can assure their organic cotton supply. We have been part of the increasing demand on transitional cotton offering it in LS and ELS fibers as an option to brands that have chosen to start using preferred fibers in their productions.

One of the biggest challenges on promoting transitional cotton is the lack of information about labeling and demonstrate its benefits.

Transitional Cotton carries certifications both at farm and industrial levels. These assure traceability of the raw materials and its processing methods.



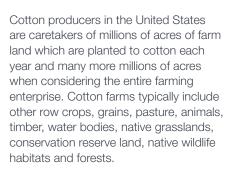
Photo: Bergman Rivera

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Bergman/Rivera

Looking Ahead

Our Newest Initiative: The U.S. Cotton Trust Protocol



Nearly all U.S. farmers and their families live and work on their farms. All believe that protecting the land, water, air, and wildlife habitat is essential for their family and community's current well-being. They are committed to protect resources for future generations.

Brands, retailers and users of cotton are establishing both short-term and longterm sustainability goals. Consumers are also demanding more transparency about the products they buy. More and more companies have shareholders who are making investment decisions based on environmental and social governance data and their supply chains must comply or face being left behind. It is essential that U.S. cotton provides high quality trusted data to meet the needs of both the supply chain and consumers who are increasingly demanding more sustainable fibers.

Building Environmental Trust

Working through a vast network of national and regional cotton associations, farmerfunded check off programs, state farm organizations and input providers, cotton farmers work to assure customers can trust U.S. cotton as being a sustainable and responsible choice. Farmers believe that supply chain partners can trust U.S. cotton to help meet their own corporate environmental and social responsibility needs.

U.S. farmers have production and management programs to assure cotton is produced efficiently and responsibly. Individual farms are distinct, and each operation is tailored to meet the requirements of the land, available natural resources and community. There is no onesize-fits-all farm plan.

Regulatory Framework

U.S. cotton farms operate under a myriad of mandatory regulations assuring that national environmental standards, federal labor and worker protection laws, and soil and water conservation requirements are met. In addition to regulations, farmers operate under principles of applying the most appropriate technologies that meet the site-specific needs and provide a fair return on investment and quality of life of families, workers and communities.

The U.S. Cotton Trust Protocol

is a program that provides a voluntary way to formalize individual farmer management practices and communicate common elements of those practices. The program is being created to enable U.S. cotton producers and industry organizations to demonstrate their commitment to more sustainable cotton production and their progress toward long-term environmental improvement, thereby meeting the sustainability goals of downstream users of U.S. cotton.

While its primary purpose is to provide guidance to best practices, it also serves as a mechanism to chart a plan for continuous improvement. It is important to recognize that specific needs vary from farm to farm and that each operation must tailor a plan to its own circumstances.

The program is supported by all segments of the U.S. cotton industry, including supply chain partners, and will be managed and implemented as a single member LLC. The Trust Protocol has established a Board of Governance representing producers, brands/retailers, civil societies, ginners, merchants, cooperatives, textile manufacturers, cottonseed crushers/ handlers, and cotton warehouses.



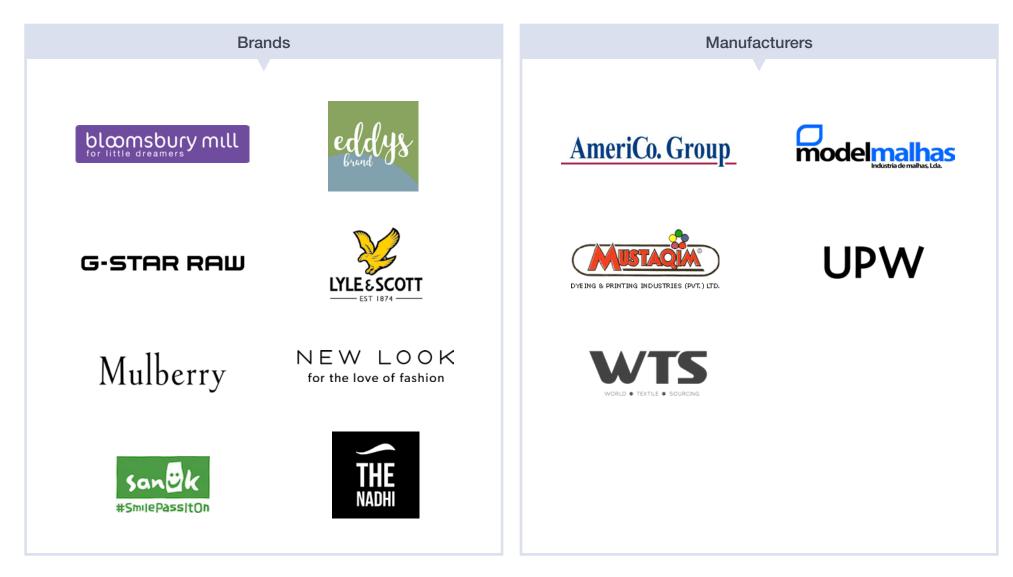
The industry recognized that for U.S. cotton to be the supplier of choice for many global brands and retailers, as well as meet the needs of the consumers, it needed to verify existing production systems and practices and establish long-term environmental goals. This program is designed to meet those needs, while showcasing U.S. cotton's story of continuous improvement. It also charts a path to meet the industry's 2025 sustainability goals.

More info on their website.

Our Newest Signatories



We warmly welcome and congratulate the newest members to the 2025 Sustainable Cotton Challenge. Their progress will be measured along side the other brands in the next annual report.



Resources



There is a plethora of information and resources available to you and your brand along the journey toward a more sustainable cotton supply:

The Cotton Up Guide from Forum for the Future: <u>cottonupguide.org</u>

Planning An Effective Cotton Strategy: textileexchange.org/materials-z/planning-an-effective-cotton-strategy

Cotton mapping to the SDGs: textilesforsdgs.org/resources/insights

Information on Organic Cotton: *∂* aboutorganiccotton.org

Information on Textile Exchange's Organic Cotton Round Table: textileexchange.org/organic-cotton-round-table
textileexchange.org/organic-cotton-round-table/ocrt-2019-vancouver

Textile Exchange Organic Cotton Market Report 2019:

textileexchange.org/downloads/2018-organic-cotton-market-report

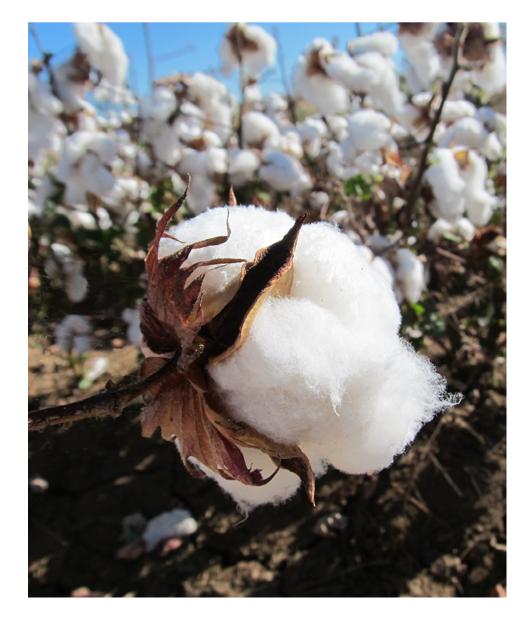
Textile Exchange Preferred Fiber and Materials Market Report 2018: store.textileexchange.org/product/2019-organic-cotton-market-report

Learning Resources for Preferred Cottons: textileexchange.org/learning-center/preferred-cotton

Matrix of Preferred Sustainable Cotton Initiatives: *d* textileexchange.org/sustainable-cotton-initiatives-matrix

Textile Exchange's Quick Guide to Organic Cotton textileexchange.org/downloads/quick-guide-to-organic-cotton

Organic Cotton Accelerator *e* organiccottonaccelerator.org



About Textile Exchange



Our work would not be possible with the tremendous support from **Textile Exchange Members** THANK YOU!

Founded in 2002, Textile Exchange is a global non-profit with more than 375 members that represent leading brands, retailers and suppliers – the quality and global reach of which has meaningfully accelerated the use of preferred fibers and increased the adoption of standards and certifications in the global textile industry. As an organization, Textile Exchange creates leaders in the sustainable fiber and materials sector by providing learning opportunities, tools, insight, standards, data, measurement and benchmarking—and by building a community that can collectively accomplish what no individual or company can do alone.

Textile Exchange members are connected to a powerful community of brands, retailers and companies, large and

small, from across the textile world—all seeking to create a more sustainable and responsible fiber and materials industry. Members gain access to a suite of valuable tools, relevant data, insight reports, industry networks and connections —and, above all, the opportunity to take action, individually or collectively. Our goal is to help you succeed. Please join us in our collective journey!

textileexchange.org/become-a-member

Textile Exchange has three tiers of membership to suit your company or organization's needs, including Friend, Supporter, Partner (Brand/Retailer) and Partner (Supply Network).





Acknowledgements

On behalf of the 2025 Sustainable Cotton Challenge participants and initiatives, we would like to thank the generous support of Textile Exchange members who are supporting the work of driving the adoption of Preferred Fiber & Materials.

ABRAPA • BASF e3 • Better Cotton Initiative • Cotton made in Africa • Cotton Connect / REEL Cotton • Fairtrade International Field to Market • ISCC • myBMP • Recover • Regenerative Organic Certified • US Cotton Trust Protocol

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Textile Exchange envisions a global textile industry that protects and restores the environment and enhances lives.

TextileExchange.org

Textile Exchange announced its new 2030 Strategy: Climate+ in October 2019. Under the Climate+ strategic direction, Textile Exchange will be the driving force for urgent climate action with a goal of 35-45 percent reduced CO₂ emissions from textile fiber and material production (pre-spinning phases) by 2030.

The 2030 Strategy: Climate+ is the result of extensive stakeholder engagement through interviews and an online survey conducted with a mix of Textile Exchange members and non-members from organizations representing brands, retailers, suppliers, manufacturers, nonprofits and professional services across the globe.

For years, Textile Exchange has promoted practices, standards, and resources that benefit the climate. Adopting the Climate+ strategy makes climate a deliberate priority and organizational focus for an impact area that requires immediate attention and for which we have many existing tools and resources. The "+" in Climate+ allows Textile Exchange to prioritize climate while continuing to address other impact areas that are interconnected with climate in most situations (e.g., water, biodiversity, forests, soil and animal welfare). The "+" is also an acknowledgement that Textile Exchange cannot achieve this new 2030 goal of 30 percent reduction in CO₂ emissions from preferred fiber and material production on its own.

Achieving the 2030 Strategy: Climate+ goal will require strong partnerships to accelerate adoption of existing tools as well as enable disruptive innovation around new business models and zero carbon materials.

The 2025 Sustainable Cotton Challenge is Partnership In Action!

textileexchange.org/2025-sustainable-cotton-challenge