

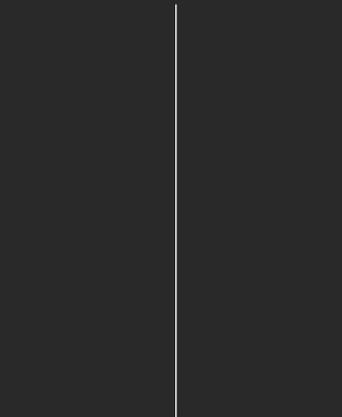
FibreTrace»



.RAWASSEMBLY.

1 Cotton & Traceability

Ethical Traceable Cotton



Inaccurate representation

Fibre Growers
Good Earth Cotton™

Traceability
FIBRETRACE™

1.1 Cotton [Cot-n]

The textile and fashion industry touches everyone's lives through the clothing we wear, fabrics in our homes and other products that surround us. Yet, it also has a significant impact on the world's resources. All textiles' production relies heavily on water, from raw material production to the industrial production stages, including finishing. However, it is not always as it seems, which is why we need change.

As we move into a place where inaccurate storytelling and greenwashing is no longer accepted by the industry and consumers alike, we take a look at what's been happening with cotton - especially the greenwashing around how much water is used in the production of one t-shirt, which many have used over the years to shine a negative light on this natural fibre.

There is much work to be done in this space and understand the true impacts of all fibres we use today, not just cotton. We need to create true transparency and benchmarking data that is up-to-date and uses both science and modern-day technology to give us an accurate picture. If we are honest, we don't actually know if what we are producing today is 'more sustainable' or 'better' than 50 years ago, as even at that time or the years in between, we did not map the impacts to be even able to compare them today. It is time to focus on regeneration of our lands, the creation of full transparency of the products we produce and honesty.



[Cot-n]

What is Good Earth Cotton?

To produce Earth's most ethical cotton, the team at Sundown pastoral are turning traditional farming techniques on their head. They question cotton farming's "conventional wisdom" at every stage of the production process.

They question how cotton can meet the demands of environmentally conscious consumers. Can cotton production be held to account? Can cotton production also be good for the Earth? Well – They think so. They learned how to push the cotton production chain's boundaries to produce high quality and ethical cotton fibres. Ethical? These same high-quality cotton fibres are also independently certified as Carbon Positive, environmentally sustainable and traceable.

Good Earth Cotton made this achievement across their entire cotton supply chain from "seed to shelf"; This is no small feat – it has taken many years of R&D and large investments in both high tech infrastructure and equipment and the best expertise in sustainable production methods.

The team continue to put high ethical standards and environmental sustainability at the centre of everything they do. It is an evolving goal and definition, and what's nice is they don't claim to know all the solutions, as we are all indeed in this together and continually learning. But they do focus their efforts on the criteria that have the most significant impact.

It influences three main areas:

- (1) their carbon footprint,
- (2) efficient resource use and
- (3) to be accountable.

To understand why this is important to the industry and the future of cotton production, the team at Good Earth Cotton & FIBRETRACE™ help us to understand the problems of today's conventional cotton production, particularly traditional growing methods used in developing countries.



The Problem

Traditional cotton production is associated with being unsustainable, unethical, and unaccountable. Conventional "old school" farming techniques are wasteful of both water and land use; This coupled with the excessive application of chemicals and fertilizers. These poor cotton farming practices lead to soil salination, degradation of soil fertility and pollution of waterways. Furthermore, these practices are highly inefficient and lead to a broader negative environmental footprint.

Conventional cotton farming also contributes to climate change. This happens when excessive volumes of nitrate fertilizer and chemicals are applied to degraded soils. These soils have reduced carbon sequestration capacity, adding to the "greenhouse" effect.

This unsustainably produced cotton is then blended into the global fashion cotton supply chain. As a result, the global cotton supply chain is tainted with "unethical and untraceable" cotton; This makes it very difficult for conscious consumers to buy ethically accountable cotton fashion. No wonder traditional cotton farming gets such a bad rap!

Good Earth Cotton



[Cot-n]

Education

Collaborating with the brightest minds in agriculture means the Sundown and Good Earth Cotton team are open to independent field trials and research. For decades they have opened arms to independent industry field trials with both universities and government-led research organisations. They value this collective history contributing to their sustainable farming techniques and Good Earth Cotton's ethical credentials.

To embrace this further, they have committed to the re-development of their infrastructure with state of the art facilities that include a lecture theatre and large scale catering facilities.

Their solar fed Green Star building aims to be Platinum Leed certified and the first large scale B Corp raw fibre operation of its kind.

'Everyone deserves the right to be educated.'

- which is why they love to share their time with students, brands, colleagues and industry bodies. They enjoy their team growth by sitting on industry boards and participating in their locale community activities, both present and future.

www.goodearthcotton.com



GOOD EARTH COTTON



[Tra-c]

Meet the leaders in Traceable Fibre Technology

Founded in 2018 by a group of likeminded leaders in the global textile industry, the team at FIBRETRACE™ are focused on fronting a new era of transparency, honesty and accountability. The FIBRETRACE™ mission is to ensure every member of the textile supply chain has the ability to take direct accountability to reduce the environmental impact of the global industry. In doing so, they aim to ultimately provide the consumer with the opportunity to choose a transparent and sustainable supply chain to follow and purchase from. Since the start of the pandemic, the industry has seen a rising demand from consumers to know how and where their clothing is made. This has also been amplified by the recent crises in Xingjiang, highlighting that most brands cannot trace their products back to their source and claim with 100% certainty what fibres their products have been made from.

The landscape has changed, and brands are now driving technology like FIBRETRACE™ due to their need to improve transparency in their supply chain and make continuous strides towards improvement. This period of time has been an awakening for the industry that we need to address long-standing problems, including the ability for brands to have true custody of the supply chain, complete transparency, understanding the impact of raw fibre production on emissions, and ensuring that we can authenticate the claims made on environmental targets and individual products with tangible evidence.

At a farm level, producers are also more open to the adoption of technology. It helps them ensure they are rewarded for committing to sustainable and innovative solutions and taking their story and passion to the end customer, which has been hard in the past.

In developing FIBRETRACE™, the team have focused on overcoming the hurdles the global industry is faced with. They know there is no finish line and that circularity is key to our future; over the years, they have been quietly developing FIBRETRACE™ they have ensured it's indestructible and can still be read, post recycling products into new yarns.

Their global team works alongside raw fibre producers, spinners, weavers manufacturers and brands to connect and unite the supply chain - from seed to store.

Transparency will empower brands and suppliers to make better decisions for their environment, customers, and the bottom line.

Every fibre tells a story.

FibreTrace»



[C]

Lets talk Carbon

In recent years the fashion industry has been focussed on water-related statistics surrounding the growing and production of cotton, with very little focus towards how cotton is actually grown today. Even using advanced science and technology, we remain transfixed on facts and figures that we struggle to qualify and lack accuracy.

Today the industry is using some of this data and statistics as benchmarks to highlight greater water, energy or carbon emission savings without actually having real-time data from agricultural and production facilities to qualify these claims.

There is a real need for change and both FIBRETRACE™ and RawAssembly are seeing more and more interest from both the cotton and fashion industries, as well as consumers, to have greater transparency. Cotton has developed a negative reputation in recent decades, especially with the increase of cheap filament yarns, such as polyester, being driven into the market and being compared to cotton, which is crazy and has been sad to see.

The impact and production of cotton is reliant on the context it was grown in. Its geographical location, soil type, irrigation system, water pollution and associated recycling practices, mean that its impact cannot be measured or defined by general figures or simple terms. We have to understand that a farming method that works for one farmer might not work the same, for another just 20 kilometres up the road, its just not as simple as that. This is why we need to map the cotton industry using todays tools and technology to create real benchmarks for the industry to use and these need to start with full traceability and transparency.

For carbon positive cotton farmers, physical traceability helps to ensure their fibre has not been compromised in the supply chain and they are being rewarded for their efforts. By using technology such as FIBRETRACE™ a brand or consumer is able to have 20/20 vision of the supply chain in real-time at every step, as a product moves from raw fibre to store, and extends to consumer interaction. This means that as the fibre moves through the supply chain we can ensure that the original fibre has not been blended with a fibre that has been potentially grown in a region that is known questionable practices, such as what we are seeing in Xinjiang.

Whilst controversial, cotton is an essential fibre that makes up a third of global fibre usage and is considered the most versatile fibre across all textiles. In addition, cotton is one of the most important fibres for future textile feedstock whether its being used as part of a mechanically recycled cotton or a chemical recycling system.

The cotton industry supports the livelihoods of an estimated 50 million families globally, many of which are smallhold farmers. Moving away from cotton in the short term is not a solution and a fibre we dont want to lose in the long term either.

All fibre sectors that promote sustainable fibres have a need to differentiate themselves through traceability to defend the claims they are making, and ensure authenticity of the fibre in the end garment the consumer purchases.

Farms like Good Earth Cotton are pioneering the way for carbon positive cotton, helping fight climate change.



FibreTrace»

**Every fibre
tells a story**

Scan the QR code
to trace the story of
this garment



fibretrace.io

[Tra-c]

Why Traceable Fibres?

Why Traceability and Why Now?

Over the last few years, consumers have played a large role in demanding that brands act with more transparency in telling them where their products come from, what they are made of and who made them.

This is largely thanks to campaigns like #whomademyclothes and Fashion Revolution's annual transparency index reports, which have encouraged consumers to be enablers for change.

A survey conducted by McKinsey in April 2020 across more than 2,000 UK and German consumers, showed an increased desire for greater sustainability with 57% already making significant changes to their lifestyles to lessen their environmental impact.[1]

Brands are really good at marketing their transparency to consumers, but the key is for consumers to learn that true transparency, from birth of fibre through to re-use and recycle, is to connect a physical tracer consumers can engage with to see the journey. FIBRETRACE™ offers a consumer engagement platform which most brands we work with are excited to take on.[1]

Traceable fibres types today;

Today, FIBRETRACE™ applies to all types of cotton, recycled cotton, recycled polyester and polyamide and responsible viscose. They are almost complete with their wool, leather and bast trials and expect to offer this solution to the market this year (2021)

References

[1] Fibretrace™ - Shannon Mercer - CEO, FibreTrace

WWW.FIBRETRACE.IO/

FibreTrace»

How it works

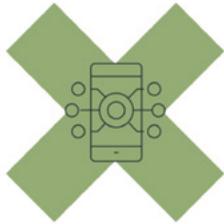
Indestructible and Safe Markers

FIBRETRACE™ embeds luminescent pigments on the fibre, right at the raw source or spinning mill. The pigment bonds and is indestructible throughout the entire textile processing cycle. The luminescent pigment is non-toxic and has no impact on your product, it has been tested and passed safety standards for human skin contact.



Sophisticated Traceability

The pigments can be read and tracked at every stage of the supply chain through the use of a handheld FIBRETRACE™ hardware device which scans and reads the brands individual signature created in the luminescent pigment. We have both handheld and inline scanning device options.



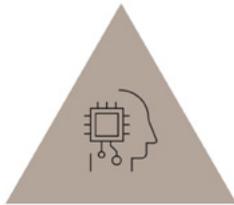
Secure and Real-Time Audit

Each audit is recorded on the blockchain. It is secure, accessible and irrefutable. Scans, or audits, are recorded in real time across the product journey for you to see at every step of the way.



Accessible Insights

This data works for you, creating actionable AI-powered supply chain insights for your business. Accessible from any device connected to the internet, with your secure login.



Consumer Engagement

The data builds a unique passport, telling the story of every item, from farm to shelf - and sharing that story with the consumer.



Introducing: Reformation x FibreTrace

The first US traceable collection, made from climate positive cotton.

Discover the power your jean's genes, with Reformation. We have partnered with leading US sustainable brand Reformation to create a new, fully traceable collection made from climate positive cotton.

Fashion Revolution's 2020 Fashion Transparency Index taught us that across 250 brands, the average transparency rating was a mere 23% with only 7% of brands publishing their raw material suppliers!

Since its establishment in 2009, Reformation has been committed to placing sustainability at the forefront of their company's ethos and continue to make improvements for their people, planet and process. Our partnership with Reformation is an example of how they are determined to push the fashion industry towards a better, more transparent shared future.

The capsule collection includes six denim pieces, and will go down in history as bringing the first fully traceable pair of jeans to market in the U.S. Phoebe Tonkin fronts the campaign which celebrates the Australian roots of the fibre the jeans are made from, Good Earth Cotton®, the world's first climate positive cotton crop - this means that it sequesters more carbon than it releases and actively fights climate change by reducing the amount of carbon emissions in the atmosphere. (This is one of Reformation's steps towards becoming Climate Positive by 2025).

[Read more here](#)



Image: Taken at the Good Earth Cotton Farm® in Moree, Australia by Olivia Repaci

Introducing: Nobody Denim x FibreTrace

Nobody Denim launches completely traceable denim collection

On the 6th of November 2020, Australian brand Nobody Denim, in partnership with FIBRETRACE™, launched a completely traceable capsule denim collection, made from the world's first carbon positive cotton, Good Earth Cotton.

The collection featured 5 iconic denim pieces that celebrate both classic Nobody Denim design notes, with the addition of sharing a completely traceable supply chain story - from seed to store.

By collaborating with FIBRETRACE™, Nobody Denim invited their consumers to be a part of a bigger story that strived for positive change within the fashion industry. The power behind FIBRETRACE™'s blockchain technology allowed shoppers to access real-time data that educated them about the origins and production process of their clothes.

As customers are increasingly demanding sustainable production processes and ethically made products, a transparent supply chain is the future of fashion. Transparency leads to accountability which leads to change. Proven to reduce costs by 9-16%, uplift revenue by 5-20% and reduce carbon emissions by 13-22% a transparent supply chain is good business (according to the Beyond Supply Chain report by the World Economic Forum). A truly transparent chain of custody allows brands to deepen trust and integrity with their customers.

John Condilis, Chair, Co-Founder and family owner of Nobody Denim commented, "Nobody Denim has a long standing history of ensuring we put care into the way we do business, we are proud to keep our manufacturing in Australia, and to take this next step in accelerating transparency and sustainability of business with FIBRETRACE™."

[Read more Here](#), plus read RawAssembly's interview with John Condilis, Co-founder of Nobody Denim in the current edition of our sourcing magazine - [Here](#).



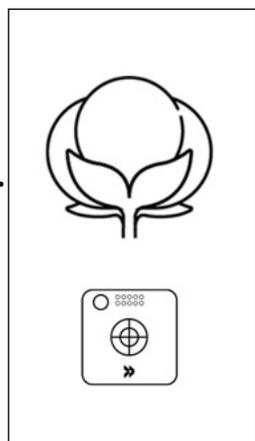
FIBRETRACE™ X NOBODY DENIM

FibreTrace embeds scannable, luminescent pigments into fibres right at the raw material stage.

The pigments are made into a slurry and applied to cotton during ginning. It utilises liquid viscose to ensure that the pigments bond to the cotton lint.

FibreTrace equals between 0.01%-0.05% (227kg cotton lint) of the overall composition for the fibre. It does not affect the hand feel and has zero impact on dyeing and finishing.

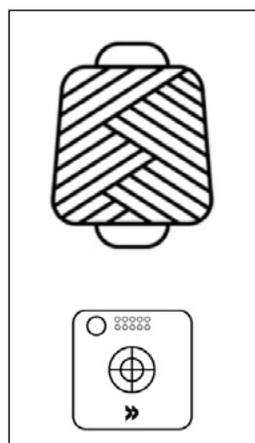
FT device scans lint at the gin and again when shipping out. It is then scanned at each stage of the supply chain.



Carbon Positive Cotton

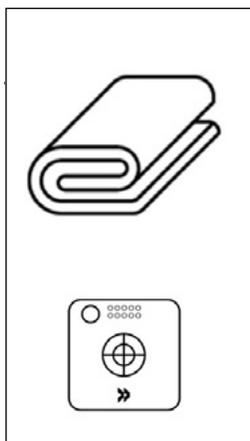
Nobody Denim used Good Earth Cotton grown in Moree, New South Wales by Sundown Pastoral Company team at Keytah Station in their capsule collection. Not only is it the world's first carbon-positive traceable cotton – but it's also the most water-efficient cotton produced on Earth according to Sundown.

The FIBRETRACE™ pigment is embedded into Good Earth Cotton at the cotton gin, straight from the farm. A small handheld FIBRETRACE™ scanning device is used to scan the cotton as its baled up, confirming that specific cotton is 100% Good Earth Cotton.



FibreTrace Sliver spun with yarn

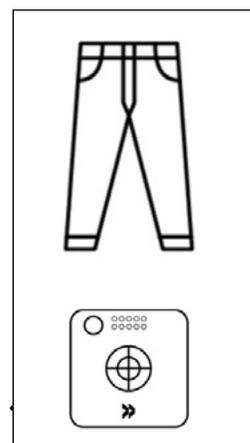
FIBRETRACE™ device scans yarn before shipping, recording data on the FIBRETRACE™ platform.



Weaving Mills

FIBRETRACE™ device scans yarn arrival at the fabric mill, Orta in Turkey where they verify it is Good Earth Cotton and tracking the product's movement. Once the fabric is woven, it is scanned again to verify Good Earth Cotton's content and recorded on the blockchain, before shipping.

As FIBRETRACE™ is a tracer pigment, it is installed within the fibre to ensure it withstands the most rigorous treatments, washing, and lasts through to reuse and recycle.



Garment Manufacturer

FIBRETRACE™ device scans fabric on arrival to the garment manufacturer and before garment production. In this case, the material is scanned upon arrival at Nobody Denim in Melbourne, Australia to confirm it is Good Earth Cotton. The information is recorded on the blockchain platform.

From there, the fabrics are cut and skillfully constructed into Nobody Denim product. Optional: Install scanners at laundry house for denim.

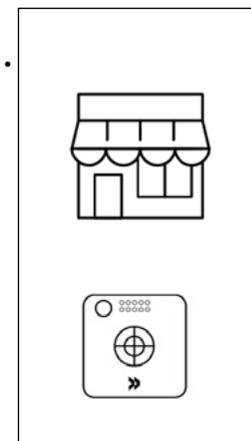
FT device scans goods at packing before shipping.

Warehouse/ DC

FIBRETRACE™ device scans finished products on arrival to the warehouse

The Product is scanned one last time to record the journey before it is sent out to a customer from the warehouse or within a retail store.

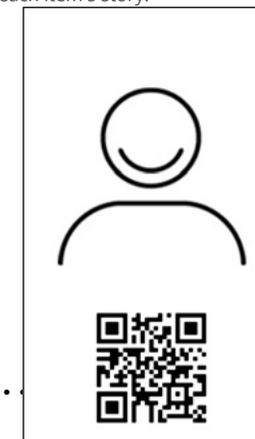
Optional: FT devices can be installed at retail and scanned on arrival to store.



Swing Ticket

Swing tickets or printed labels with a unique QR code that links to the consumer-facing FT site can be added to each product.

Consumers can then access the platform to review the brands' transparent supply chain and learn each item's story.



"EVERY FIBRE TELLS A STORY, OURS IS A CARBON POSITIVE ONE"

NOBODY DENIM

.RAWASSEMBLY.

NOBODY DENIM &
FIBRETRACE™



FIBRETRACE
X
NOBODY
DENIM
·
WATCH
HERE

Read our interview with John Condilis, Co-founder Nobody Denim in the current edition of our sourcing magazine

We touched base with John Condilis, Co-founder, at Nobody Denim to discuss what it will take to create a thriving manufacturing industry onshore in Australia, and talk about their new pioneering and traceable collection that brought consumers the world's first completely traceable collection – from seed through to store using Good Earth Cotton and FibreTrace™



www.nobodydenim.com

FibreTrace»

Image: Nobody Denim

[Click to access Here](#)

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