

35th INTERNATIONAL COTTON CONFERENCE BREMEN 2021



Presentation

Session: **Panel Discussion: Responsible Fibre Production Programs (C2)**

Title: **Climate +**

Speaker: **La Rhea Pepper**, Textile Exchange, Wyoming, USA

Presentations are available on the conference archive: <https://baumwollboerse.de/en/cotton-conference/lectures/>

Conference Organization

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Bremer Baumwollboerse, Bremen, Germany. E-Mail: info@baumwollboerse.de

Welcome to 2021

CLIMATE

TextileExchange • VISION 2030

Soil Health



Biodiversity



Water

OUR MISSION

Textile Exchange **inspires** and **equips** people to **accelerate** adoption of preferred materials in the textile value chain. We focus on **carbon reduction, soil health, water and biodiversity** as part of our holistic approach to drive positive impact for the entire industry.

OUR VISION

We envision a global textile industry that **protects** and **restores the environment**, while **enhancing lives**. **By 2030** we aspire to guide the textile industry to **reduce** GHG emissions (CO₂ equivalents) by **45% from a 2020 baseline**.

OUR STRATEGY

Our strategy is to **accelerate climate action** in the textile industry by providing **trusted data and reporting, market-based solutions**, and a **community** that can do what no single company or organization can do alone.

Textile Exchange by the numbers*



500+

Active Members of
Textile Exchange



2,400+

Participants across
11 Round Tables



200+

Companies engaged in
benchmarking their use
of preferred materials



1,250+

Industry professionals
convened at our most
recent Conference



27,000

Sites in 83 countries
certified to our 7 active
standards



70+

Online educational
events hosted
throughout 2020

* Numbers correct as of January 2021

Our Member (& Partner) Network



Farm / Fiber

Supplier / Manufacturer

Brand / Retailer

CLIMATE

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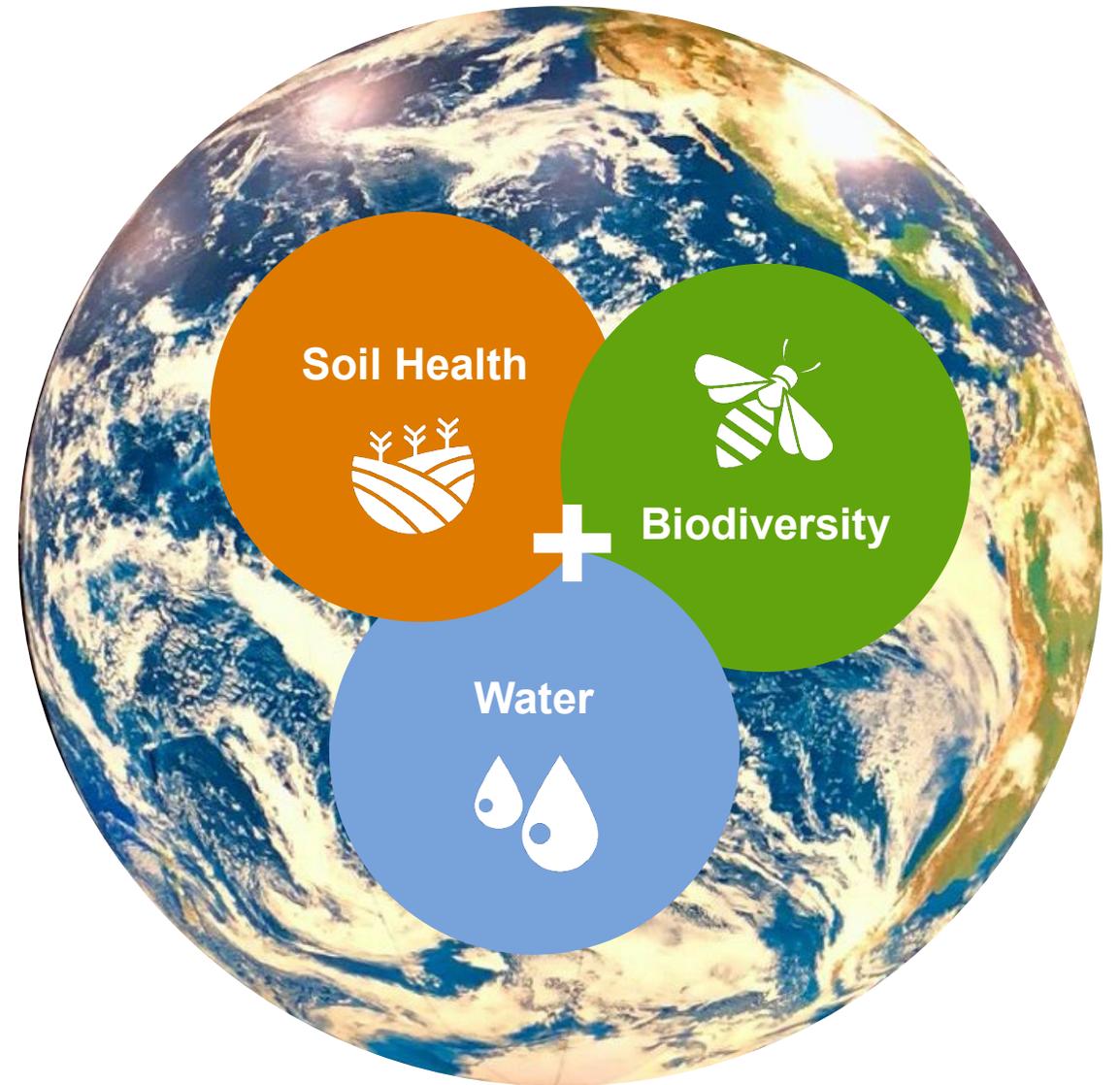
A driving force for urgent climate action in textile fiber and materials production.

Enabling and guiding the textile industry to reduce GHG emissions (CO2 equivalents) **45% by 2030** in the pre-spinning phase of textile fiber and materials production.



Grounded in Partnership+

Amplifying positive impacts in soil health, water, + biodiversity.



Partnering & Convening to Address Impacts

Meaningful change will only occur through collaboration & recognition of the interconnected supply chain.



Key Climate Strategies

Increase uptake of recycled fibers



Proliferate Regenerative practices



Mitigate Land Use Change



Support transition to renewables



Encourage Innovation & Circularity



Improve measurements tools and close data gaps

Calculating the GHG Footprint of Raw Materials



To estimate the GHG emissions for raw materials, we used:

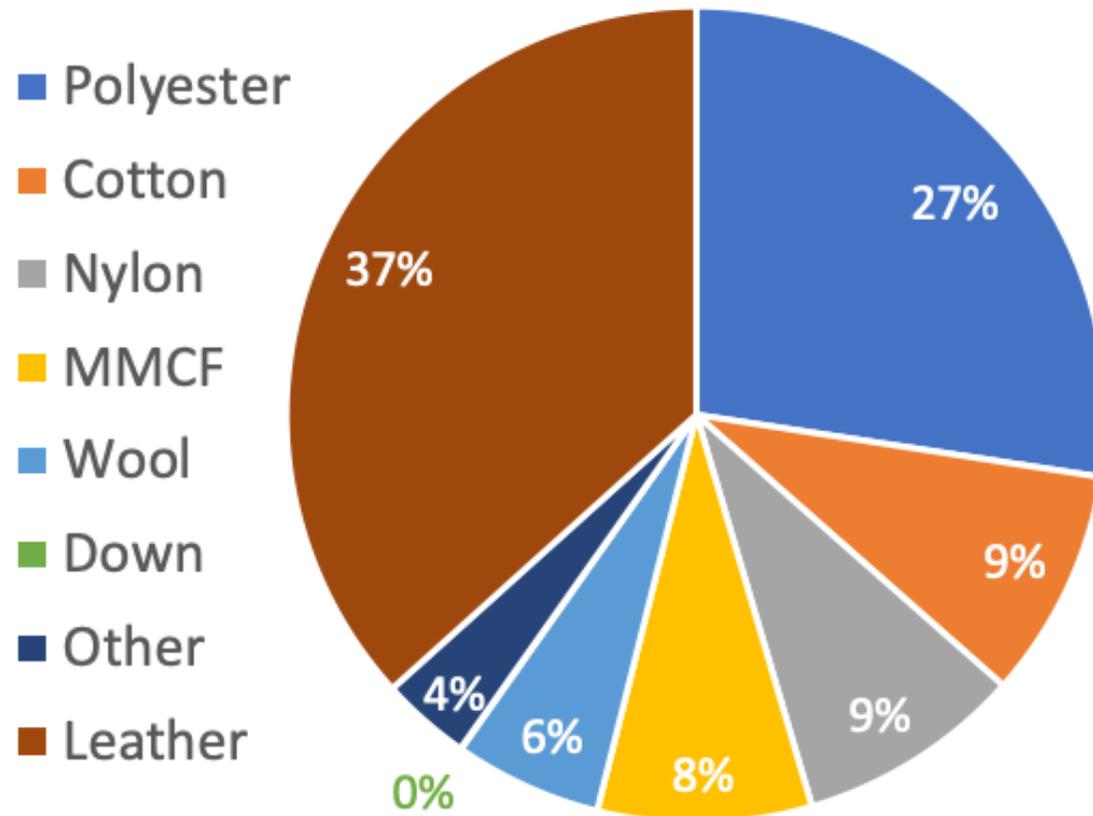
- a) Global fiber volume data from the latest **Preferred Fiber & Materials Market Report**
- b) Higg MSI GHG “mid-points”

- While these inputs allow us to make a reasonable estimate, **there are limitations**, for example:
 - **Outdated** data midpoints and methodologies
 - **Limitations of scope** (no land use change, biogenic carbon and soil carbon) etc.
 - **Missing** emissions factors for specific **initiatives** and standards
 - Incomplete volume information (e.g., other synthetics)
- **Textile Exchange is committed to pursuing an LCA+ approach** through our definition work, as well as improving LCA data sets, so that impacts are more accurate and inclusive.

LCA+

Baseline: 2019 Emissions

611 million tonnes CO₂e

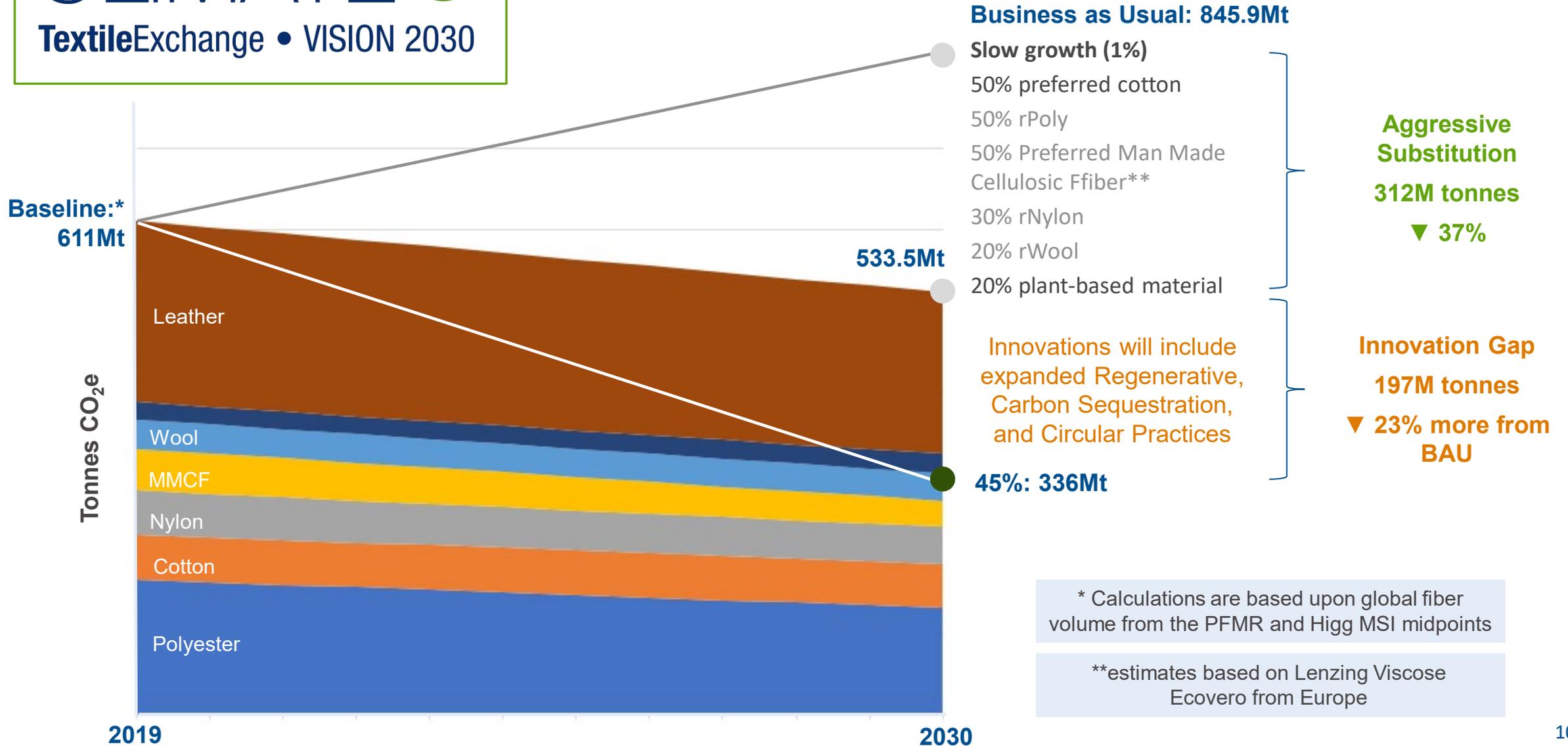


Fiber Volume 2019

| Material | Tonnes | % |
|-----------|-------------|-------|
| Polyester | 57,700,000 | 52.5% |
| Cotton | 26,000,000 | 23.7% |
| Nylon | 5,580,000 | 5.1% |
| MMCF | 7,084,100 | 6.4% |
| Wool | 1,070,000 | 1.0% |
| Down | 270,000 | 0.2% |
| Other | 4,870,216 | 4.4% |
| Leather | 7,300,000 | 6.6% |
| Total | 109,874,316 | 100% |

CLIMATE

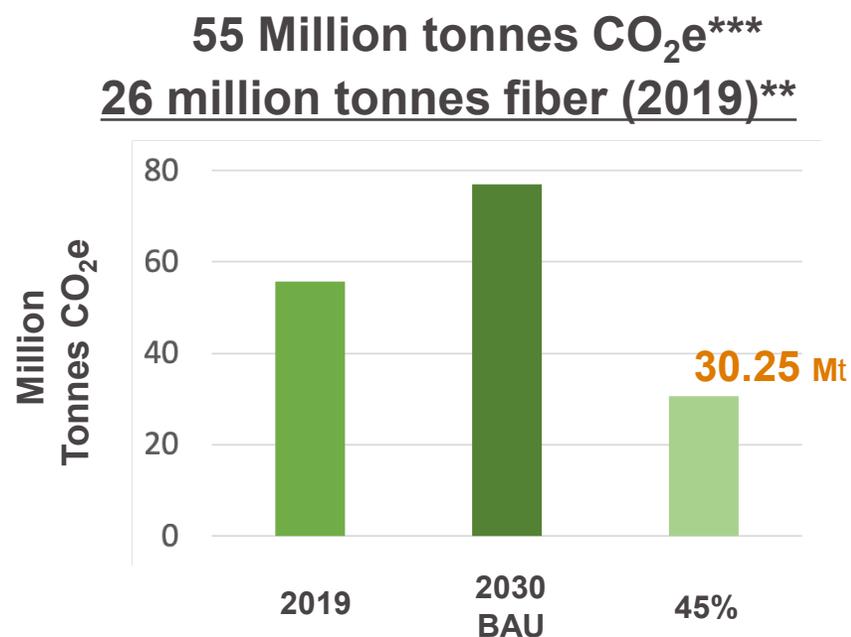
TextileExchange • VISION 2030



* Calculations are based upon global fiber volume from the PFMR and Higg MSI midpoints

**estimates based on Lenzing Viscose Ecovero from Europe

Cotton



| Key Sources of Emissions* | |
|---------------------------|-----------|
| Field emissions | 30 to 60% |
| Irrigation | 8 to 28% |
| Fertilizer production | ~20% |
| Farm equipment operations | 12 to 23% |
| Pesticides | ~1% |
| Transport | 2 to 4% |
| Ginning | 10 to 20% |

*Rough estimates across LCAs in the Higg MSI

**Calculated using global fiber volume in the PFMR

***Calculated using available GHG emissions in the MSI



A “Common Ground” for us all.

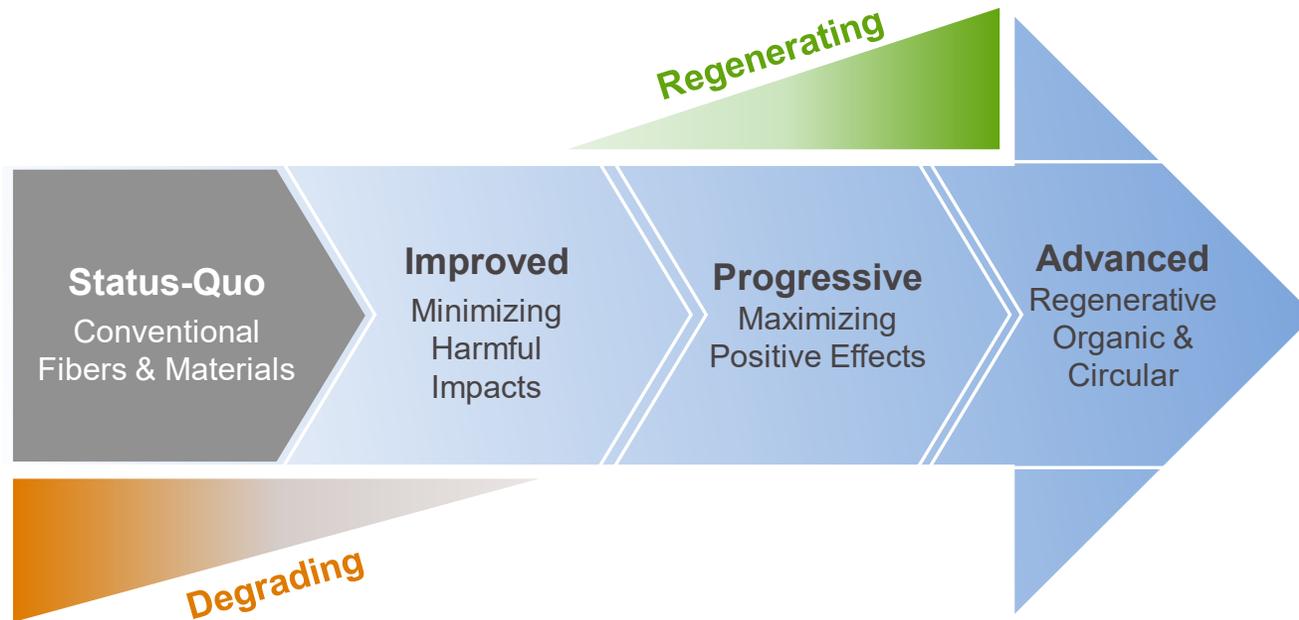
Soil health is **core** to our Climate+ Strategy

With additional benefits for carbon sequestration, climate resilience, farmer livelihoods, biodiversity, and reduced agro-chemical inputs.

- +** Reduce dependence upon synthetic fertilizers & pesticides
- +** Building Biodiversity
- +** Improved water use and retention

The Industry's Direction of Travel

Encouraging Continuous Improvement



2025 Sustainable Cotton Challenge

Second Annual Report 2020

<https://textileexchange.org/2025-sustainable-cotton-challenge/>

Produced by:



Formed in
2017

122+

Brands,

Retailers &

7 Suppliers

have committed
to sourcing

100%

sustainable
cotton by

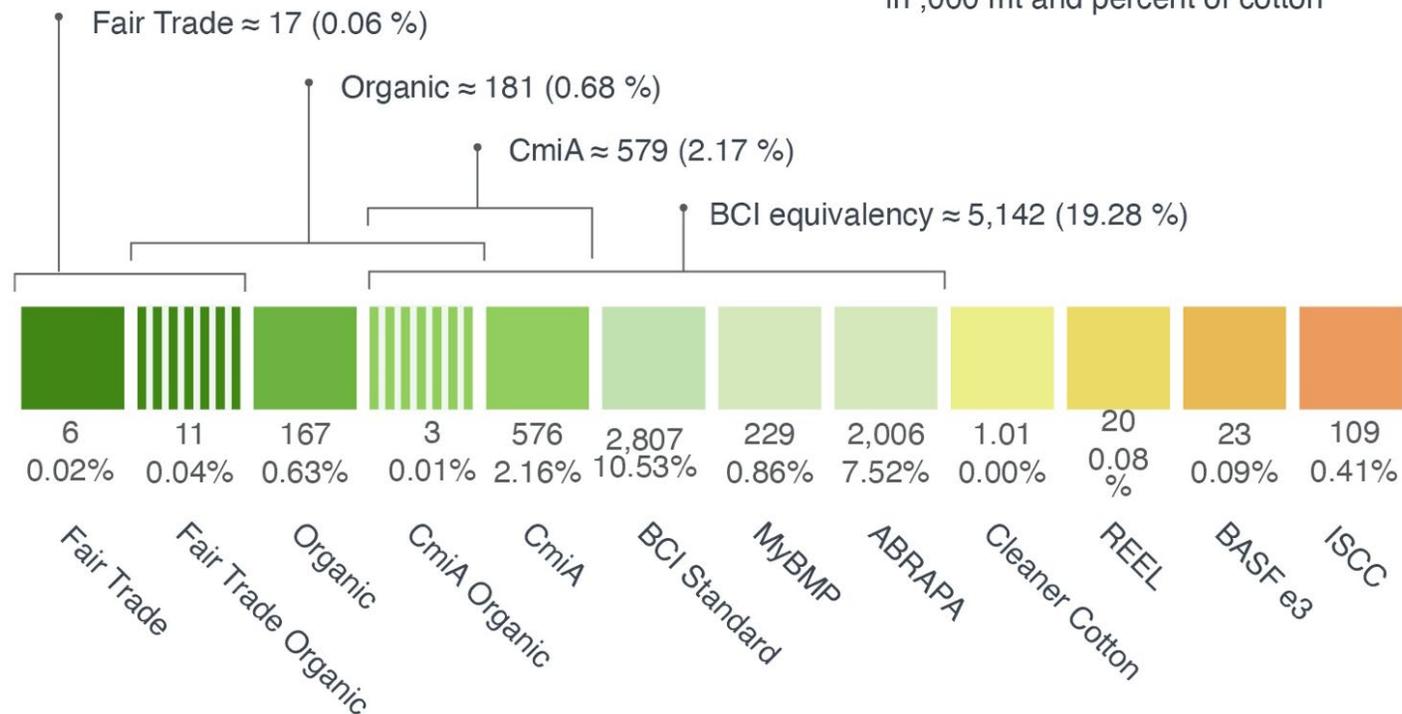
2025



2025 Sustainable Cotton Challenge

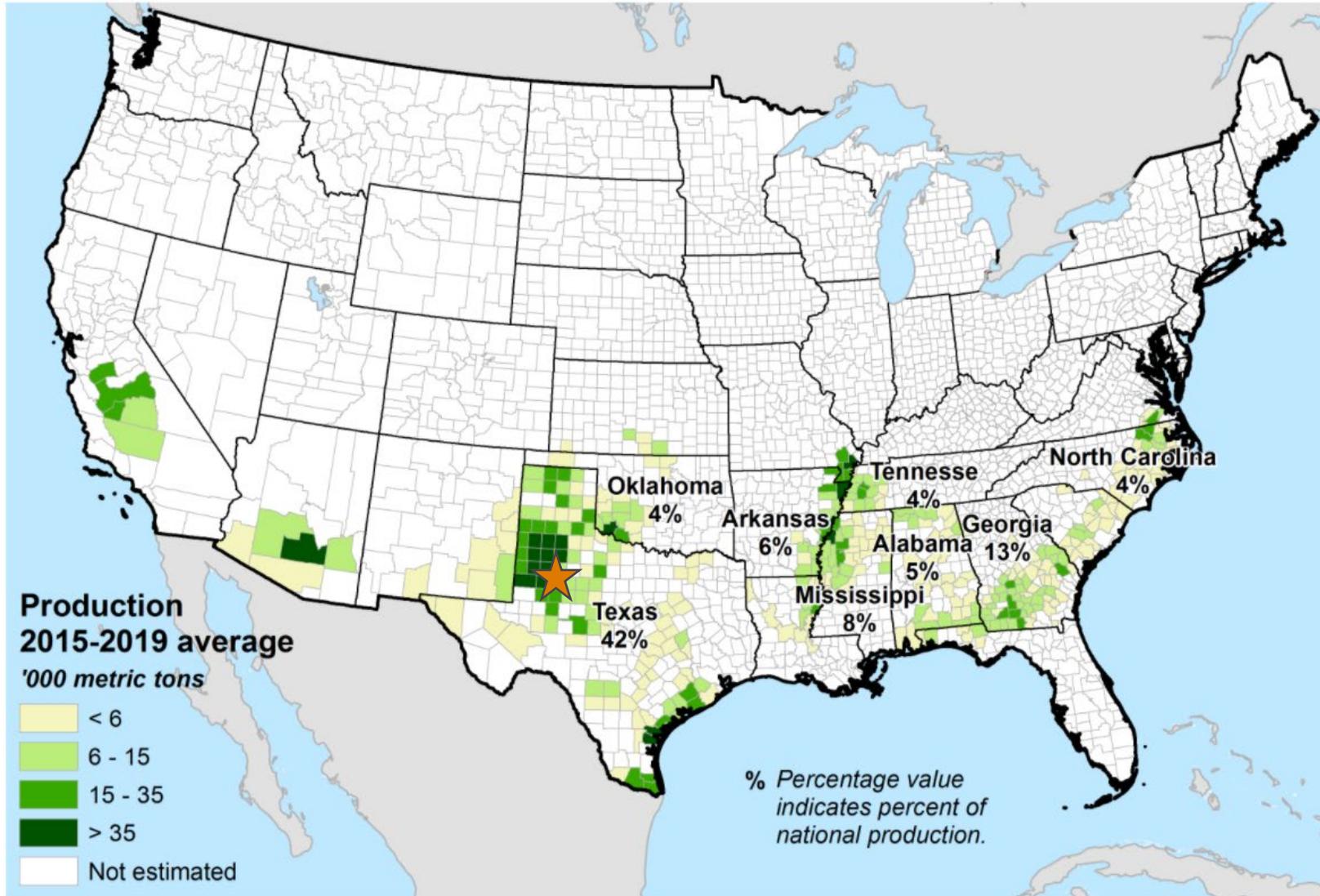
PREFERRED COTTON FIBER PRODUCTION IN 2017/18

in ,000 mt and percent of cotton



- ISCC
- BASF e3
- REEL
- Cleaner Cotton
- ABRAPA
- MyBMP
- BCI
- CmiA
- CmiA Organic
- Fair Trade
- Fair Trade Organic
- Organic
- Regenerative Organic Certified
- US Cotton Trust Protocol

Cotton Production in the U.S.



USDA Foreign Agricultural Service
Global Market Analysis
International Production Assessment Division

Source: USDA National Agricultural Statistics Service (2020). Global Crop Production Maps By Region: Cotton. https://ipad.fas.usda.gov/rssiws/al/crop_production_maps/us/USA_Cotton_Total_Lev2_Prod.png



U.S. Cotton Yield Trends



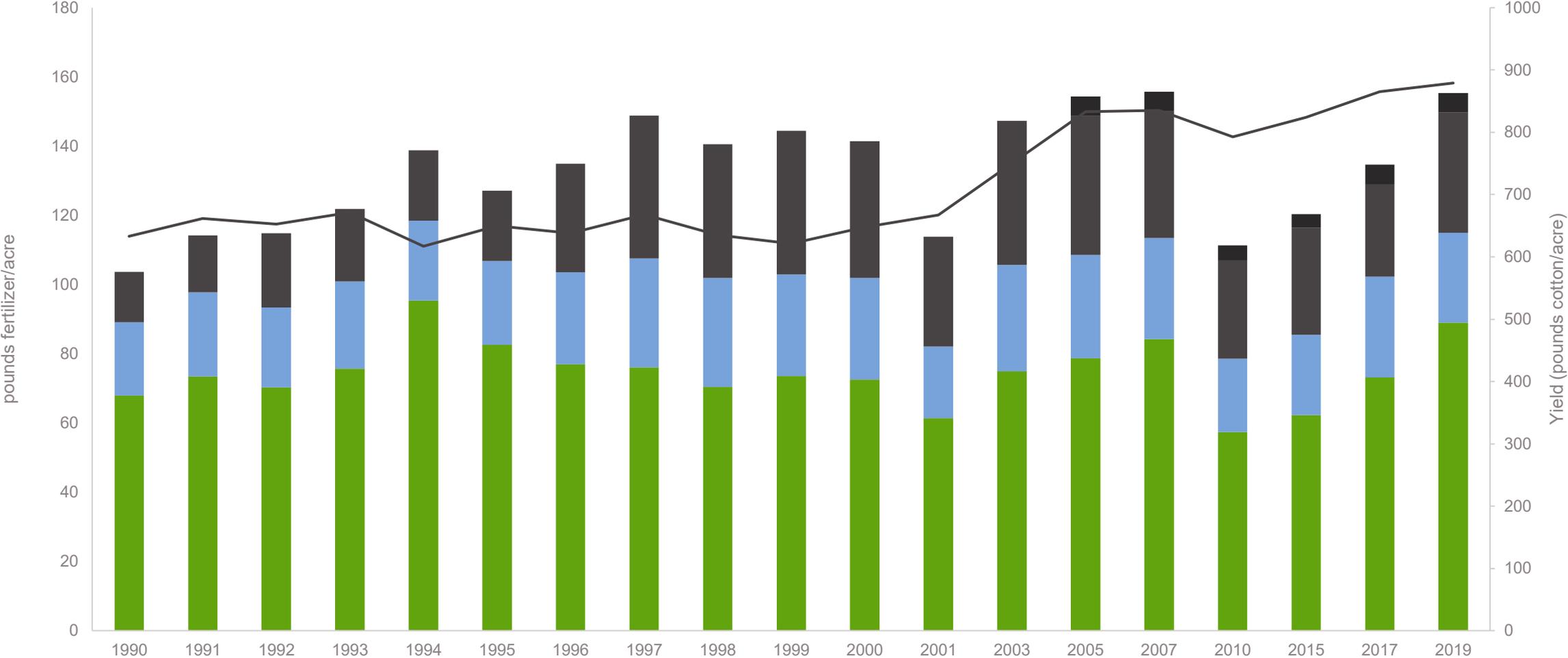
- Yields have increased for both time periods:
 - 1994 to 2019 by 43% (USDA NASS QS)
 - 2010 to 2019 by 11% (USDA NASS QS)
- Three-year rolling average was used which is standard practice or reporting yield through time

Reference:

U.S. Department of Agriculture, National Agricultural Statistics Service Quick Stats. <https://quickstats.nass.usda.gov/> (USDA NASS QS)



USDA NASS Fertilizer Applications (pounds fertilizer/acre)



■ Nitrogen
 ■ Phosphate
 ■ Potash
 ■ Sulfur
 — Yield (3 yr. avg.)



U.S. Price of Cotton 1990-2019



- The inflation-adjusted cotton price per pound decreased ~46% from 1990 to 2019. (USDA NASS QS)

Reference:

U.S. Department of Agriculture, National Agricultural Statistics Service Quick Stats. <https://quickstats.nass.usda.gov/> (USDA NASS QS)



Moving from a **\$Price\$** to a **Value Paradigm**

1. Prioritize **Natural Capital Accounting**.
2. Invest in a new textile economy based on **Regenerative** and **Circular** principles.
3. Adopt and Implement a **Preferred Fiber Strategy**.
4. **Collectively** approaching governments.
5. Increasing **Consumer Engagement**.
6. Invest in **Impact Incentives**.
7. Plan for long term **Climate Resilience**.

Annual Conference

The 2020 Textile Sustainability Conference convened more than 1,250 industry professionals from 50 countries, representing 580+ companies.

#TextileExchange20 was a virtual event in response to the COVID-19 pandemic and was accessible globally. For the second year in a row, our conference was recognized as being climate neutral through a partnership with South Pole.

The 2021 Textile Sustainability Conference is scheduled to take place in Dublin, Ireland on November 15–19, 2021.



Thank you



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