THE LIFE CYCLE OF A JEAN

Understanding the environmental impact of a pair of Levi’s® 501® jeans

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A HISTORY OF LIFE CYCLE ASSESSMENT
What is a Life Cycle Assessment?

- **Systems-based, quantitative method for evaluating the environmental impact of a product**
- **A tool used to assess the stages and impact of a product’s entire life, from raw material extraction (cradle) to waste (grave)**
- An LCA typically does **not include**:
  - Social impacts
  - Economic impacts
Benefits of Life Cycle Assessment

- Allows us to focus on the most significant environmental impacts
- Informs product decisions to reduce environmental impact
- Supports engagement with external stakeholders to reduce the impact of materials and consumer care
THE LIFECYCLE OF A LEVI’S® 501® JEAN

1. COTTON PRODUCTION
2. FABRIC PRODUCTION
3. GARMENT MANUFACTURING
4. TRANSPORTATION & DISTRIBUTION
5. CONSUMER USE
6. RECYCLING

END OF LIFE
SUMMARY OF OUR FINDINGS
The entire lifecycle of one pair of Levi’s® 501® jeans equates to:

**Climate Change:** 33.4 kg CO₂-e...
- 69 miles driven by the average US car
- 246 hours of TV on a plasma big-screen

**Water Consumed:** 3,781 liters...
- 3 days worth of one US household’s total water needs

**Eutrophication:** 48.9 g PO₄-e...
- The total amount of phosphorous found in 1,700 tomatoes
CONSUMER CARE AND COTTON CULTIVATION
THE MOST SIGNIFICANT IMPACT AREAS

CONSUMER CARE

COTTON CULTIVATION
Fiber production, predominantly cotton, contributes by a wide margin to water consumption.

**CRADLE TO GRAVE WATER CONSUMPTION**

**PERCENTAGE BY PHASE**

- **FIBER**: 68%
- **CUT, SEW, FINISH**: 1%
- **FABRIC PRODUCTION**: 6%
- **SUNDRIES & PKGNG**: 2%
- **CONSUMER CARE**: 23%

**CRADLE TO GRAVE WATER CONSUMPTION AMOUNT BY PHASE (LITERS)**

- **FIBER**: 2,565 liters
- **FABRIC**: 236 liters
- **CUT, SEW, FINISH**: 34 liters
- **SUNDRIES & PKG**: 77 liters
- **CONSUMER CARE**: 860 liters

*END OF LIFE AND TRANSPORT, LOGISTICS, RETAIL HAVE NEGLIGIBLE CONSUMPTION*
LEVI’S® 501® JEANS: CLIMATE CHANGE IMPACT

Consumer Care phase dominates the climate change impact area (driven by high use of non-renewable energy).

CRADLE TO GRAVE CLIMATE CHANGE IMPACT PERCENTAGE BY PHASE

- FABRIC PRODUCTION: 27%
- CONSUMER CARE: 37%
- TRANSPORT, LOGISTICS, RETAIL: 11%
- CUT, SEW, FINISH: 8%
- END OF LIFE: 3%
- SUNDRIES & PKGNG: 5%
- FIBER: 9%

CRADLE TO GRAVE CLIMATE CHANGE IMPACTS AMOUNT BY PHASE (kg CO₂-e)

- FIBER: 2.9
- FABRIC: 9.0
- CUT, SEW, FINISH: 2.6
- SUNDRIES & PKG: 1.7
- TRANS., LOGISTICS, RETAIL: 3.8
- CONSUMER CARE: 12.5
- END OF LIFE: .9
Consumer Use Findings

• Significant differences between regions:
  - Consumers in China mostly wash in cold water and air dry
  - American consumers had the highest use of non-renewable energy from dryer usage but more prevalently use cold water
  - Consumers in the UK and France mostly air dry their jeans but they use more hot water than American or Chinese consumers
  - Consumers in the USA, UK and France wash their jeans more frequently than in China

• Washing every 10 times instead of every 2 times reduces energy/climate change and water consumption impacts by up to 80%.
EDUCATE CONSUMERS & EXPAND THE BETTER COTTON INITIATIVE
The Better Cotton Initiative exists to make global cotton production better for the people who produce it, for the environment it grows in, and better for the sector’s future.
CARE TAG FOR OUR PLANET

- Wash Less
- Wash Cold
- Line Dry
- Donate to Goodwill®
ARE YOU READY TO COME CLEAN?

TAKE THE QUIZ & PLEDGE TO WASH LESS.

START
WATERLESS™

1 BILLION LITERS SAVED
Circular Economy Vision

Sustainably Produced Product

Recycle

Repair

Re-wear

Clothing Collection
Cotton is arguably the world’s most important natural fiber

» Nearly everyone on Earth comes into contact with cotton on a daily basis

» Cotton production supports 250 million people’s livelihoods (ICAC)
But cotton production also has challenges

- water management
- soil depletion
- working conditions
- incorrect / over use of pesticides
Goal: Transform cotton production worldwide by developing Better Cotton as a more sustainable mainstream commodity.
By 2020 Better Cotton is:

- 5 million farmers
- >30% of global production
Better Cotton

Global cotton production addressing the 3 pillars of sustainability

Environmental + Social + Economics

An agricultural management system:

- Better Cotton System
  - 6 Principles
  - 44 Criteria
  - 8 Indicators
- Training farmers and verifying practices
- Physical segregation of Better Cotton (ginner level)
- Enabling supply chain uptake
- Brand demand as Driver
Better Cotton Standard System

A holistic approach to sustainable cotton production covering all three pillars of sustainability: environmental, social, and economic.

1. Production Principles and Criteria
2. Capacity Building
3. Assurance Program
4. Chain of Custody
5. Claims
6. Results and Impact
About Better Cotton

Produced by verified farms who are then licensed to sell Better Cotton.

Available in a range of quality and specifications comparable with non BCI cotton from the same region.

Tracked and verified through the Better Cotton Tracer using mass balance system.

Grown in multiple countries in large quantities.

Better Cotton is...

Water

Crop Protection

Habitats

Grown according to the BCI production principles which minimise the negative impact of fertilisers and pesticides, and care for water, soil health and natural habitats.

Soil Health

Fibre Quality

Decent Work
In 2013, Better Cotton represented approx. 3.7% of global production.

In 2014, Better Cotton accounted for 7.6% of global production.
BCI Council

Current BCI Council, as of 2015

1. Civil Society
2. Producer Organisation
3. Suppliers & Manufacturers
4. Retailers & Brands
5. Independent

Joost Oorthuisen
Barry Clarke
A Community of Brands: Pre-Competitive Collaboration
Better Cotton is supported by Global Brands & Retailers

74% of cotton will be Better Cotton by 2020
100% of cotton will be more sustainable by 2020
100% of cotton will be Better Cotton by 2015
50% of cotton will be more sustainable by 2020
100% of cotton will be more sustainable by 2018
100% of cotton will be more sustainable by 2020

And many others…
Questions?
Thank You

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