Using Wood is good
Man Made Cellulose Fibers for Textiles
An outstanding sustainable process for the latest generation of cellulose fibers.
World fiber consumption in mn. tons.

Organic cotton is less than 1% of regular cotton.

source: USDA, ICAC, CIRFS
Positive proof of global warming.
Amazingly low eco-footprint
Natural from cradle to factory gate

Wood as raw material and fuel for integrated fiber production

Wood is a sustainable resource, naturally absorbent, fully biodegradable

More than 50% of wood utilized with superior recovery of energy and by-products\(^1\)

\(^1\) Lenzing site only
Highly efficient use of the raw materials

Processing wood into fibers shows a wood utilization rate of up to over 80%.
3 Generations of Cellulose Fibers
Viscose, Modal, Lyocell

Viscose 100 Years

Modal 50 years

TENCEL® 20 Y.

1910 1940 1960 1990 2011

*) TENCEL® ist die Lenzing Marke für die generische Faser Lyocell
Two main production processes

The Viscose spinning process industrialized in the late 1930ies by Lenzing and Hoechst, after first industrial production in late 19th century.

The Modal spinning process industrialized in 1965 by Lenzing. Both processes are chemical based dissolving and spinning processes. Today these processes are highly engineered and using bypass and recycling technologies to use resources wisely and keep the Eco-footprint at the lowest possible level.

The Lyocell process, industrialized in 1992 by Curtaulds and Lenzing. This process is based on a physical pulp dissolving process and has an amazingly low Eco-footprint.
Lenzing Viscose® is produced in an integrated Bio-refinery process
TENCEL® - the most sustainable fiber production process

Closed loop production
99% recycling of process substances
Life Cycle Assessment

LCA as a tool for benchmarking environmental impact of fibre and pulp production (sites, technologies)

Identifying most critical impact areas

Data are used for ongoing pilots (EU, SAC, MSI)

Monitoring new methods to access water-footprint or bio-diversity.
Life Cycle Analysis for more sustainability
Relative environmental load per ton of fiber

- Global warming
- Consumption of non-renewable resources
- Human health
- Soil pollution
- Water pollution
- Air pollution
- Ozone layer depletion
- Acidification of air, water and soil
- Eutrophication
New data for Lyocell

Source: www.apparelcoalition.org/higgindex/
Lenzing’s core business: Man-made cellulosic fibers

Textile Fibers
- Fashion
- Home textiles
- Technical applications
- Functional applications

Advantages
- High strength
- Softness
- Comfort through breathability
- Ideal blending partner for cotton & polyester

Nonwoven Fibers
- Wipes
- Hygiene
- Medical applications
- Technical applications

Advantages
- High strength
- Absorbency
- Purity
- Softness
- Sustainable Certifications
Certificates, Eco-Labels and Awards

- VÖNIX (Austrian Sustainability Index)
- The European Eco-Label (European Flower)
- Responsible Care
- Oeko-Tex Standard 100
- European Award for the Environment
- PEFC (Chain of Custody)
- FSC (Chain of Custody)
- Compostable (Din Certco, Vincotte, US BPI)
- Home compostable (Vincotte)
- Biodegradable (Vincotte)
- ECOCERT ERTS (Standard TENCEL)
- USDA Biobased (TENCEL und Lenzing FR)
- Food contact compliance
- etc.
Using Wood is Good
Plant-for-the-Planet
The children's initiative For Climate Justice
CO₂ → O₂

Aufforstung

Baumspender

Holznutzung

CO₂-Bindung in Holzprodukten
Hier würde ich auf die grüne Fläche eingehen, die 250 Millionen Tonnen CO2 entspricht und durch eine weltweite Aufforstung gebunden werden können.
LABEL INSIDE THE SHIRT.

TREE-SHIRTS
Stop talking. Start wearing.

www.plant-for-the-planet.org
SIZE XL

30°C 100% Tencel®
Thank you for your attention!

Univ. Lect. Mag. Lorenz Wied MBA

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