





To find out more about fiber choices and how they relate to the four heaviest environmental impacts in the fashion industry, please see the Clean By Design website: www.nrdc.org/cleanbydesign



### © Natural Resources Defense Council August 2011

# Not All Bamboo Is Created Equal

Bamboo Grass Has Many Naturally Redeeming Qualities:

- Grows rapidly and is naturally regenerating
- Improves soil quality and prevents erosion
- Needs few pesticides
- Absorbs 5 times more carbon and produces 35 percent more oxygen than a similar stand of trees

The grass is turned into a fiber one of two ways: mechanically or chemically, but most commonly with chemical processing which has a heavy impact.

The problem arises in processing the grass into a fiber.

# Natural Bamboo (Bamboo Linen) = True Green

Natural bamboo can be processed mechanically

By crushing the woody parts of the bamboo plant and then using natural enzymes to break the bamboo walls into a mushy mass, the natural fibers can be mechanically combed out and spun into yarn

This is essentially the same eco-friendly manufacturing process used to produce linen fabric from flax or hemp. Sometimes this type of bamboo is called bamboo linen.

Requires minimum pretreatment and has high affinity for dyes

Very little bamboo linen is on the market because it is more labor intensive and costly.

## Conventional Viscose Rayon made from Bamboo = Not Truly Green

- Manufactured via the same viscose process as rayon
- Heavy use of chemicals and energy in processing the fiber

Conventional viscose rayon made from bamboo is the most common bamboo fabric.

### Lyocell Process Rayon Fibers Made from Bamboo Are a Better Choice

The Lyocell process creates new fiber from bamboo with less toxic chemicals in a closed-loop manufacturing process (see factsheet on viscose rayon: lyocell/Tencel).

# **Beware of Conventional Bamboo's "Green" Claims**

The redeeming natural qualities of bamboo grass are undermined by the chemically intensive nature of producing the fiber

■ The Federal Trade Commission (FTC) has recently cracked down on bamboo labeling, forcing companies to list "rayon made from bamboo" when items are not natural bamboo.

The FTC has also starting going after false green claims, noting that rayon made from bamboo has not been shown to retain any natural antimicrobial properties of the bamboo plant.

We recommend avoiding conventional viscose bamboo, and instead seek out mechanically processed bamboo or lyocell bamboo as a greener alternative.

For detailed information on bamboo, please see our in-depth report and citations to research sources.