Low Toxicity & Organics

All the production processes utilised in textile production can involve the use of harsh chemicals – the growing and harvesting, the extraction and extrusion, the spinning, weaving and knitting and the finishing, dyeing and printing of textiles. The textile industry continues to be one of the most damaging industries in the world, second only to the chemical industry.

At the growing and harvesting stage, the development of alternative types of fibre production such as organic cotton and hemp is one solution to these negative environmental impacts.

At the processing and finishing stage, there have been some developments in the cleaning up of industrial processes, such as an electrochemical process which re-uses dye chemicals, rather than discarding them with the waste water at the end of the process. Another solution is the development of natural and low-impact dyes.

The printing of textiles is another part of the production process that is extremely harmful. There have been some recent developments into printing inks which are solvent-free, but there is still much research to be done. One solution is digital printing, which is being promoted as having less environmental impacts than conventional printing.

Certification is an important issue within low toxicity and organics. There are now several organisations which are certifying textile products that have been grown or produced under organic or low-impact conditions.

Facts

• Cotton provides nearly 50% of global fibre needs and is perceived by most consumers as a ‘natural’ product, yet it uses nearly 25% of all insecticides applied to agricultural crops on 2.5% of the world’s cropped areas. (http://www.pan-uk.org)

• At least 20,000 people in developing countries die every year from poisoning by agricultural pesticides (http://www.pan-uk.org)

• In Uzbekistan, 85% of the Aral Sea has disappeared as a result of drainage for cotton production. (http://www.traid.org.uk)

Key Organizations

Pesticides Action Network - http://www.pan-uk.org/
PAN works to promote safe alternatives for the production of food and cotton farming, eliminating the dangers of toxic pesticides.

The Soil Association - http://www.soilassociation.org/textiles/
The Soil Association is the UK’s leading campaigning and certification organisation for organic food and farming.

Environmental Justice Foundation – http://www.ejfoundation.org
This organisation runs campaigns to defend environmental damage and human rights.

Reading Materials


Dyeing for a change: current conventions and new futures in the textile colour industry Better Thinking (2006) Available at www.tedresearch.net


Eco Textile News trade magazine http://www.ecotextile.com/
Projects of Interest

Climatex - http://www.climatex.com
A project between renowned Swiss textile firm Rohner and the authors of *Cradle to Cradle*, William McDonough and Michael Braungart. They developed an upholstery fabric from wool and ramie, using only 13 of the lowest toxic dye colours in Rohner’s range of dyes. The fabric is completely compostable and ‘edible’.

Luxury Redefined – http://www.luxuryredefined.co.uk/
A two year project to develop the most ethical and sustainable tshirt possible. It was a collaboration between Better Thinking, an ethical brand consultancy and John Smedley knitwear.

Companies and Designers

Ciel Ltd - http://www.ciel.ltd.uk/
Clothing range using azo-free dyes and organic materials.

Gracie Burnett - http://www.gracieburnett.com
Clothes without chemicals. Designer/maker working with natural dyes.

Gossypium - http://www.gossypium.co.uk/
Organic and fair trade cotton clothing for men, women and children.

Greenfibres - http://www.greenfibres.com/
Organic clothing, fabrics, yarns, and soft furnishings.

Howies - http://www.howies.co.uk/
Quality, functional casual wear using organic cottons with educational slogans and advice for their customers, on major environmental issues.

Loomstate Jeans - http://www.loomstate.org
100% certified organic designer jeans and casualwear.

Tshirt & Sons – http://www.tshirtandsons.co.uk/
The only Soil Association certified screen print company in the UK. They have done a ‘carbon footprint’ analysis of their whole printing process.

Audio Visual Resources

White Gold: The true cost of cotton http://www.ejfoundation.org/page85.html


Moral fibre – Organic Cotton Part 2 –PAN UK http://www.youtube.com/user/PESTICIDEACTI ON#p/f/8/mLDk1bK-gDQ


Noon Design – US natural dye production facility http://www.youtube.com/watch?v=8g9eBaR0iCM&feature=player_embedded

Textiles Environment Design
Chelsea College of Art & Design, London
www.tedresearch.net