



## ECOMTEX – ECOLOGICAL MASS TEXTILES

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Maria Goldbach and Prof. Dr. Uwe Schneidewind, Workshop Chair  
Chair for Production and the Environment  
Institute of Business Administration  
Carl von Ossietzky University Oldenburg  
Postfach 2503  
26111 Oldenburg  
Germany  
Tel.: +49 441 798-4172  
Fax: +49 441 798-5282  
E-Mail: maria.goldbach@uni-oldenburg.de

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### KEY WORDS

textile mass market, cost management, customer requirements, ecological improvements, organic cotton

### 1 ECOLOGICAL TEXTILES ON THEIR WAY TO THE MASS MARKET

Even though ecological products are established in market niches of many sectors, the market share lying far below 5%, they do not penetrate the mass market yet. This is equally true for ecological textiles. The objective of the research project EcoMTex is to develop strategies and instruments that enable the diffusion of ecological textiles in the mass market, focusing on three aspects:

1. Restricted ecological perspective: The nature and degree of current ecological optimisation does not sufficiently take into account final customer requirements or cost aspects. This leads to ecologically convincing but not competitive products. We will present an ecological assessment frame which supports a selection of ecologically optimised dyes and additives from an ecological as well as a cost and final customer perspective.
2. Insufficient cost management: The cost drivers of ecological products have only been identified partly to date. The causes of higher costs do not merely lie in higher costs for raw materials but in small batch sizes, high switch costs as well as necessary co-ordination efforts. By managing costs along the entire supply chain, important cost saving potentials may be realised. We will present an instrument for a chain-wide cost management enabling the realisation of a target price.

3. Incomplete sight of the market: The producers of ecological textiles aim at ecologically sensitive customers in small market niches. Other customer segments could be reached by combining ecological with other communication aspects focusing on final customer requirements. We will present marketing and communication strategies able to activate ecologically non-sensitive customers. In this context, the functionality requirements of the developed textiles play an important role.

The strategies and instruments to overcome the mentioned barriers are developed for two relevant fibres in the textile sector: cotton (as the most important natural fibre) and polyester (as the most important synthetic fibre).

## 2 COST MANAGEMENT IN GREENING TEXTILE CHAINS

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Maria Goldbach and Dr. Stefan Seuring  
Chair for Production and the Environment  
Institute of Business Administration  
Carl von Ossietzky University Oldenburg  
Postfach 2503  
26111 Oldenburg  
Germany  
Tel.: +49 441 798-4172  
Fax: +49 441 798-4193  
E-Mail: [maria.goldbach@uni-oldenburg.de](mailto:maria.goldbach@uni-oldenburg.de)

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A major obstacle for successfully introducing ecologically optimised textiles on the mass market, are their higher prices in comparison to conventional ones. The reasons for this are multiple and complex. Yet it is evident that current cost management techniques are insufficient. Cost drivers, i.e. the causes for higher costs, do not merely lie in higher prices for ecologically optimised fibres as well as dyestuff and additives, but in small batch sizes, high switch costs as well as necessary co-ordination efforts.

The following key findings and theses are to be discussed concerning cost management in greening textile chains:

- **Conventional cost management techniques do not take into account production and coordination costs along the entire textile chain**

Up to date, cost management techniques merely focus on production costs within companies. These have therefore to be extended in two regards: First, in order to optimise cost efficiently, both conventional production costs, which include single costs as well as activity-based and transaction costs, need to be taken into consideration. Second, the scope of cost management needs to be extended from company to supply chain level.

- **Higher costs occurring in the greening of textile chains are often time or quantity sensitive**

The costs related to the greening of the chain are often related to restrictions in time or quantity and may therefore be managed by influencing these two dimensions. Costs such as learning effects or consulting are only of temporary importance and disappear after a certain period. These are strongly caused by the innovation process. Possible scenarios for managing these costs may be temporary subventions. Costs such as higher switching costs, cleaning costs for machinery are related to the small order quantities for ecologically optimised textiles and may be overcome by increasing quantities along the entire chain.

- **Important cost differences are stated for different kinds of fibres, requiring different cost management strategies**

The higher costs for cotton are partly due to the higher price for organic cotton which is related to the transfair premium, i.e. the premium paid to farmers for growing organic cotton. These costs remain even over a longer time and are thus of structural nature. In polyester chains the main cost factors lie in the change of process costs and smaller quantities. These costs may be reduced or even eliminated over time and are therefore innovation induced.

- **Higher costs are related to the differences in perception between conventional and green products**

Several cost factors such as the transfair premium, but also higher prices for yarn, may often not be explained from a real cost perspective, but are related to the fact that the involved actors consider the higher costs to be justified and necessary from a marketing or ethical point of view.

The presented theses aim at pointing out the major axes of research for a successful chain-wide cost management in greening supply chains.

### 3 THE CULTURAL DIMENSION OF CLOTHING AND THE MARKETING OF ECO-TEXTILES

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Dipl.-Oec. Dirk Fischer  
Chair for Strategic and Environmental Management  
Institute of Business Administration  
Carl von Ossietzky University Oldenburg  
Postfach 2503  
26111 Oldenburg  
Germany  
Tel.: +49 441 798-4186  
Fax: +49 441 798-4193  
E-Mail: [dirk.fischer@uni-oldenburg.de](mailto:dirk.fischer@uni-oldenburg.de)

Dipl.-Oec. Rita Pant  
Institute for Ecology and Economy  
University of St Gallen  
Tigerbergstr. 2  
9000 St Gallen  
Switzerland  
Tel.: +41 71 2242739  
Fax: +41 71 224-2722  
E-Mail: rita.pant@unisg.ch

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Ecologically optimised textiles entered the German textile world at around the end of the 1980's. However, their share of sales on the German textile market has stagnated for years and is estimated at around 0.5%. The latest empirical surveys to ask about the influence of ecological criteria on purchases and use of clothing reveal a fairly uniform tendency. Consumers certainly value "nature" when they buy clothes, but ecological aspects in a narrower sense do not play a part, and "eco fashion" that is recognisable as such arouses often massive rejection.

The thesis of the paper is that the poor market success of eco-textiles can be attributed to a failure to take account of the cultural dimension. Clothing like no other product fulfils social psychological and above all symbolic functions. It reflects attitudes to life and moods and is used on the one hand to attain membership of a group, and on the other hand to distinguish the wearer. Guided by the best intentions, suppliers have in recent years concentrated on further ecological optimisation of the textile chain. The marketing strategy was based above all on rational information and arguments designed to persuade consumers. In contrast, the social psychological functions of the product were neglected both in design and in advertising, including presentation in the shop and/or catalogue.

In view of ever more rapidly changing fashion cycles and an increasing focus on fun in consumption, this is no way to reach the mass market. Apart from the price, it is above all the design and style of eco-textiles that is given in surveys as a major negative feature. The collections on offer suffer from the "eco-look" image. A qualitative study we were involved in produced the clearest reaction in this area. The reaction was stronger the more fashion-conscious the consumers questioned considered themselves to be.

The major theses are summarised as follows:

**1. Clothing like no other product fulfils social psychological and above all symbolic functions**

It reflects attitudes regarding life and moods and expresses self-identity. It is used on the one hand to attain membership of a group, and on the other hand to distinguish the wearer.

**2. The poor market success of eco-textiles can be attributed to a failure concerning the cultural dimension.**

Guided by the best intentions, suppliers have concentrated on further ecological optimisation of the textile chain in recent years.

The social psychological functions of the product were neglected both in design and advertising, including their presentation in the shop and/or catalogue:

- The marketing strategy was based above all on rational information and arguments designed to persuade consumers.
- The eco-textile-collections offer suffer from the "eco-look" image. Apart from the price it is above all the design and style of eco-textiles that is given as a major negative feature in surveys.

### **3. The producers and suppliers of eco-textiles have to go a new way for marketing their products**

- The marketing-communication has to be less rational and more emotional, focusing on fun.
- The marketing has to decouple ecological optimisation and the typical "eco-look".

The presentation at the conference will show to what extent a more closer analysis of the functions of (clothing) products and their perception can help to find a way out of the eco-niche.

## **4 PROTECTING THE ENVIRONMENT AND HUMAN HEALTH, GAINING CONFIDENCE OF THE CONSUMER, SAVING MONEY**

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Ismene Jäger  
Hydrotox GmbH  
Bötzingen Straße 29  
D-79111 Freiburg  
Tel: +49 0761-455 12 0  
Fax: +49 0761 4 55 12 34  
E-Mail: info@hydrotox.de

Dr. rer. nat. Dirk Bunke  
Öko-Institut e.V., Institute for Applied Ecology  
PF 6226  
D-79038 Freiburg  
Germany  
Tel.: +49 0761-45 295 46  
Fax: +49 0761-47 54 37  
E-Mail: bunke@oeko.de

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The research work focussing on the optimisation of textile auxiliaries, chemicals and dyestuffs has lead to the following theses:

- To develop ecologically optimised concrete product-lines based upon cotton produced to organic farming standards and polyester, an evaluation of textile auxiliaries, chemicals and dyestuffs is indispensable.
- Based on assessment systems, which are already placed in the textile industry, appropriate criteria for the ecological evaluation can be generated.
- At present, textile chemicals and dyestuff with quite differing ecological properties are in use.
- Textile chemicals and dyestuffs are available on the market that are especially favourable from an ecological point of view. They have to fulfil the economic and technological goals of the mass market. Such products exist.
- In order to manage the complexity of products and information, necessary for an ecological assessment of the product range, an access-supported data management tool has been developed.
- Ecological assessment tools can be integrated in automatic process control systems
- Supplementary data that would be desirable from the scientific point of view, but are not available within an adequate period of time will, do not necessarily delay decision-making processes.
- Systematic ecological optimisation of the whole production process can save energy, raw materials, working time and reduce production costs.
- Transparency concerning the ecological properties of the chemicals in use will increase the confidence of the public.

Additional project papers present the EcoMTex-criteria for textile chemicals and dyestuffs, developments concerning product assessment methods and introduces the product information management system DialogPLUS.

## 5 GREEN PRODUCTION AT OTTO - A MANAGEMENT RATHER THAN A TECHNICAL CHALLENGE

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Simone Back  
Otto Versand GmbH  
Umwelt- und Gesellschaftspolitik  
Wandsbeker Str. 3-7  
22172 Hamburg  
Germany  
Phone: +49 (0)40 / 6461-7461  
Fax: + 49 (0)40 / 6461-5337  
Mail: [simone.back@otto.de](mailto:simone.back@otto.de)

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Today, ecological textiles are facing fierce competition from conventional fashion. The decisive factors in the buying decision remain fashion and price.

For this reason, Otto has consistently geared its organic cotton programme to customers' wishes and integrated these articles into its conventional assortment. This gives rise to the following tasks:

- Ecological optimization of finishing at producers who in the past have been conventional and fashion-oriented.
- Reduction in existing additional costs compared to conventional production.

**Thesis 1: Without genuine benefits for the parties in the chain, there is unlikely to be any sustained trend towards green production**

The participating producers had neither ecological experience nor above-average interest in green fashion prior to the start of the programme. To motivate them for the programme, an advisory concept was developed especially in finishing, which leads both to top ecological standards and to economic and qualitative benefits. In this way, there is a chance of changing processes ecologically on a sustained basis.

**Thesis 2: Additional costs in green production are a consequence of inefficient value-added chains and markets**

The additional costs for ecologically optimized textiles are often based on an inefficient value-added chain, on spill-over effects and little competition. These problems can in part be solved by a neutral or internal upstream chain coordination, as Otto has demonstrated in its organic cotton programme. Further optimization potential exists for example through "co-petition": combining the demand of various companies in one joint chain structure, in particular where no competitive differentiation takes place (first stages in the chain).

**Thesis 3: Successful ecological value-added chains are a question of change management**

Buyers and producers accept ecological products insofar as these provide advantages or at least no disadvantages financially or organizationally. An elimination of economic disadvantages is often not enough if, at the same time, it is necessary to implement value-added chains which appreciably differ from the normal business processes. This would, for example, be the case with a consistent supply chain management or value marketing. These strategies frequently lead to substantial cost-saving potential, but run contrary to traditional buying and production processes. Against this background, the implementation of ecological strategies is frequently a general question of innovation and change management in companies and value-added chains.