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August 15, 2008

Federal Trade Commission
Office of the Secretary
Room H-135 (Annex B)
600 Pennsylvania Avenue, N.W.
Washington, DC 20580

RE: Green Building and Textiles Workshop – Comment, Project No. P084203

The National Cotton Council of America (NCC) offers comments regarding the revision of “Guides for the Use of Environmental Marketing Claims” (Green Guides). NCC is the central organization of the U.S. cotton industry representing producers, ginner, warehousemen, merchants, cooperatives, textile manufacturers, and cottonseed handlers and merchandisers in 18 states stretching from California to the Carolinas. NCC represents producers who cultivate between 10 and 14 million acres of cotton each year. Annual cotton production averaging approximately 20 million 480-lb bales is valued at more than \$5 billion at the farm gate. While a majority of the industry is concentrated in the 18 cotton-producing states, the down-stream manufacturers of cotton apparel and home-furnishings are located in virtually every state. The industry and its suppliers, together with the cotton product manufacturers, account for more than 230,000 jobs in the U.S. In addition to the cotton fiber, cottonseed products are used for livestock feed, and cottonseed oil is used for food products ranging from margarine to salad dressing. Taken collectively, the annual economic activity generated by cotton and its products in the U.S. economy is estimated to be in excess of \$120 billion.

The comments in the attached document follow up on points made by Dr. Patricia O’Leary, Cotton Incorporated, during her participation as a panelist in the Federal Trade Commission’s (FTC) “Green Building and Textiles Workshop” conducted July 25, 2008. The comments address points the industry believes the FTC should consider in revising the guides related to the marketing claims for cotton to be considered as “sustainable”, “natural” and “renewable”.

The NCC appreciates the opportunity to provide comments on these “Guides” and looks forward to continued cooperation with FTC on this effort.

Sincerely,

A handwritten signature in blue ink, appearing to be the initials "A".

Bill M. Norman, D. Engr.
Vice President, Technical Services

Attachment

August 15, 2008

Federal Trade Commission
Office of the Secretary,
Room H-135 (Annex B)
600 Pennsylvania Avenue, N.W.
Washington, DC 20580

RE: “Green Building and Textiles Workshop – Comment, Project No.P084203”

The following comments address three basic points for the Federal Trade Commission (FTC) to take into consideration when revising the “Guides for the Use of Environmental Marketing Claims” (Green Guides): 1.) cotton, both conventionally- and organically-produced, can be considered “sustainable,” “natural,” and “renewable,” 2.) all marketing claims should be based on substantiated science-based research, drawing upon valid and credible research from social and natural sciences, and 3.) a multitude of misleading claims exist in the market place, leaving many consumers confused and cynical.

Both Conventionally- And Organically-Produced Cotton Can Be Considered “Sustainable,” “Natural,” and “Renewable”:

Cotton, both conventionally- and organically-produced, can be considered natural and renewable. Both conventionally- and organically-produced cotton can also be sustainable, according to the USDA definition of that term¹. Sustainable agriculture, or sustainable cotton production, tries to achieve three goals: to affect the environment in a positive way, to be economical and profitable, and to enhance the quality of life. The intersection of these three goals meets the goals of sustainability – balancing the effects on the environment, profitability, and quality of life.

The alternative to efficient and sustainable global production of cotton fiber using all available modern technologies is man-made chemical fiber production such as polyester. Unlike natural fibers such as cotton that are “derived from either animals or plants² and are renewable or capable of being replaced by natural ecological cycles or sound management practices³, synthetic fibers⁴ cannot be considered sustainable or renewable because most are derived using by-products of nonrenewable resources⁵ including petroleum or natural gas.

Marketing Claims Should Be Substantiated With Science-Based Research:

Environmental marketing claims should be substantiated using science-based research, which should include social sciences such as market research that deal with human behavior⁶ as well as natural sciences^{6a} such as physics, chemistry, or biology. The current “Green Guides” interpretation of substantiation which says claims “often require

competent and reliable scientific evidence, defined as tests, analyses, research, studies or other evidence based on the expertise of professionals in the relevant area,”⁷ should hold true for the revised textile guidelines.

A Multitude Of Misleading Claims Are Confusing Consumers:

The FTC should revise the Green Guides to include the environmental marketing of textiles. Misleading marketing claims are prevalent at retail, as evidenced by several research studies and by reviewing the on-line websites of several retail channels. Following are examples of claims that cause consumer confusion and research findings that support consumers’ confusion and cynicism toward “green” products:

A. False or Misleading Claims

- In a review of 1,018 consumer products that made a total of 1,753 environmental claims, Terra Choice found that all but one provided some form of false or misleading information⁸.
- A global study by the Economist Intelligence Unit⁹, found that 31% of corporations surveyed admitted their company’s sustainability efforts centered mostly on communication and how effectively they were getting the message across, rather than actual change.
- An article titled “Shades of Green: Decoding Eco Fashion’s Claims”¹⁰ analyzed several misleading claims described below:
 - Claim: Use of recycled materials saves energy, reduces carbon-dioxide emissions and keeps waste out of landfills.
Actuality: Many companies don’t use 100% recycled materials. Instead they blend it with other materials to make the final garment softer. Percentages vary amongst retailers.
 - Examples of retailers which appear to be using the claim: Bagir, Patagonia, Timberland, Coca-Cola T-shirts.
- “Transitional cotton” is a marketing claim used on products sold at Wal-Mart¹¹; however, the USDA does not recognize transitional cotton in their definition for organic cotton land requirements¹².
 - Claim: “For cotton to be certified organic, it must be grown without chemical fertilizers, defoliant or pesticides for at least three years. What about cotton that’s newly introduced to the process? It’s called transitional cotton. When you buy this transitional-cotton tee, you are practicing a healthier, sustainable lifestyle. Support baby organic cotton.”¹¹
Actuality: According to labeling from the USDA, transitional cotton is not recognized and cotton that appears to be labeled “organic” or “baby organic,” cannot have prohibited substances applied to it for a period of 3 years preceding harvest of the crop¹². There is also no apparent evidence or science-based research supporting the claim that “transitional cotton” is “healthier.”

- Many claims confuse consumers by marketing the product as organic when it appears to be made with conventional cotton in the fiber content or product description.
 - Claims Made by Retailer:
 - Target¹³:
 - Product/Claim: Tree Organic Tee
 - Fiber Content: 100% cotton.
 - Sears¹⁴:
 - Product/Claim: Down 2 Earth Short Sleeve Organic Tee - "Look and feel good in this organic cotton crewneck tee."
 - Fiber content: 100% Cotton.
 - Kohl's¹⁵:
 - Product/Claim: Ek-GO Green Organic Camp Shirt: "Organic cotton construction keeps you cool and comfortable."
 - Fiber content: Cotton.
 - Dillard's¹⁶:
 - Product/Claim: Eileen Fisher Organic Cotton Tank
 - Fiber content: Cotton/spandex.
 - Gaiam¹⁷:
 - Product/Claim: Organic towels: "Wrap yourself in 100% cotton high-impact color with low-impact dyes."
 - Fiber content: 100% cotton.
- Several products offered at retail are associated with certified organic cotton; however, the certification details do not appear to be available.
 - Claims Made by Retailer:
 - Bed Bath and Beyond¹⁸:
 - Product: Allergy Luxe Organic Pillow:
 - Claim: "Pillow cover is made of 100% certified organic cotton."
 - Wal-Mart¹⁹:
 - Product: Organic 3-Piece Towel Set:
 - Claim: 100% certified organic cotton.
- Many products are labeled with vague terminology which seems to suggest the marketed products are good for the environment with no apparent supporting evidence or definitions.
 - Claims Made by Retailer:
 - Nike²⁰:
 - Product: Nike Premium Organic Half-Zip Women's:
 - Claim: "Not only does it look fantastic with its sleek silhouette and classic styling, but it's kind to the environment."
 - Macy's²¹:
 - Product: Lauren Ralph Lauren, Spa Organic Flat Sheet:
 - Claim: "Sleep easy while contributing to a healthier world."

- Nordstrom²²:
 - Product: Juicy Couture Puff Sleeve Fleece Hoodie: organic cotton/recycled polyester.
 - Claim: “Organic cotton and recycled polyester come together in an adorable eco-friendly hoodie.”

B. Consumer Confusion and Cynicism

Many consumers are unsure what they are buying when it comes to environmentally-friendly textiles, and the countless number of claims being made without regulation is making it even harder for consumers to understand what is available at retail. The following bullet points describe and substantiate consumers' confusion over “green” products and terminology being used to market textiles, and supports the need for the FTC to define “green” terminology in the updated Green Guides.

- “Eco-friendly, fuel efficient, biodegradable, natural and organic are used in different categories to emphasize green, but can confuse and cloud the mind of consumers,”²³ according to an article from *Brandweek*.
- Research from Cotton Incorporated indicates that “only one third of consumers correctly understand the terms “renewable” and “sustainable.” However, consumers do relate to “natural” products, including natural fibers.”²⁴
- The Hartman Report on “Sustainability: Understanding the Consumer Perspective” finds that just over half (54%) of consumers claim any familiarity at all with the term “sustainability,” and most of these consumers can not define it appropriately upon probing.²⁵
- A quote from the executive editor of GreenBiz.com, Joel Makowe also notes the lack of guidance in the industry: “One of the challenges facing consumers and companies alike is we don’t have definitions for green products and we don’t have definitions for green companies.”²⁶
- “Most respondents were either “not sure” or answered “yes” that organic cotton textiles were made from recycled materials (67%) or may contain soy (78%),” based on Cotton Incorporated research conducted jointly with the Organic Trade Association presented at the FTC “Green Building and Textiles Workshop” by Dr. O’Leary.²⁷
- Dr. O’Leary also indicated that consumers’ confusion could be fueling a lack of believability, with research that showed only one third of consumers (35% for clothing and 31% for home textiles) say they “always” or “usually” believe environmental claims being made, while over half (55% for apparel and 58% for home textiles) said they only “sometimes” believe the claims they read.²⁷
- A recent study conducted by WSL Strategic Retail stated that 42% of consumers polled said they are skeptical and don’t trust that products labeled as “organic” actually are organic.²⁸
- “Not only have consumers become confused over the claims habitually used by green marketers, but scientific evidence itself has often been equivocal

regarding the relative environmental benefits of competing products and processes."²⁹

References

1. Sustainable Definition:

- **United States Department of Agriculture, 1990 Farm Bill:** "Sustainable agriculture" was addressed by Congress in the 1990 "Farm Bill" Under that law, "the term sustainable agriculture means an integrated system of plant and animal production practices having a site-specific application that will, over the long term:
 - satisfy human food and fiber needs
 - enhance environmental quality and the natural resource base upon which the agricultural economy depends
 - make the most efficient use of nonrenewable resources and on-farm resources and integrate, where appropriate, natural
 - biological cycles and controls
 - sustain the economic viability of farm operations
 - enhance the quality of life for farmers and society as a whole."[Food, Agriculture, Conservation, and Trade Act of 1990 (FACTA), Public Law 101-624, Title XVI, Subtitle A, Section 1603 (Government Printing Office, Washington, DC, 1990) NAL Call # KF1692.A31 1990].
- **The Brundtland Definition:** The World Commission on Environment and Development (the Brundtland Commission), agreed in 1987 on a definition of sustainable development that is now generally recognized: "Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs". (http://www.ace.mmu.ac.uk/eae/Sustainability/Older/Brundtland_Report.html)
- **United Nations:** The United Nations NGO Committee on Sustainable Development follows the Brundtland Commission's definition of sustainability and the Three-Dimension Concept of the «Declaration of Rio on Environment and Development», adopted by the Rio Conference, 1992.
- **Journal of Soil and Water Conservation:** As it pertains to agriculture, sustainable describes farming systems that are "capable of maintaining their productivity and usefulness to society indefinitely. Such systems... must be resource-conserving, socially supportive, commercially competitive, and environmentally sound." [John Ikerd, as quoted by Richard Duesterhaus in "Sustainability's Promise," Journal of Soil and Water Conservation (Jan.-Feb. 1990) 45(1): p.4. NAL Call # 56.8 J822]

2. Natural Definition

- Being in accordance with or determined by [nature](http://www.merriam-webster.com/dictionary/natural) (<http://www.merriam-webster.com/dictionary/natural>)
- Used for thousands of years, natural fibers are derived from either animals or plants. (Fashion: from Concept to Consumer, 8th edition, Gini Stephens Frings, Copyright 2005 by Pearson Education, Inc. Upper Saddle River, NJ 07458)
- NATURAL FABRICS are created from fibers of animal's coats, silkworm cocoons, and plants' seeds, leaves, and stems. (<http://www.fabrics.net/natural.asp>)

- **Natural Fibre** any hairlike raw material directly obtainable from an animal, vegetable, or mineral source and convertible into nonwoven fabrics such as felt or paper or, after spinning into yarns, into woven cloth.
natural fibre. (2008). In *Encyclopædia Britannica*. Retrieved August 03, 2008, from Encyclopædia Britannica Online:
<http://www.britannica.com/EBchecked/topic/406148/natural-fibre>

3. Renewable Definition

- capable of being replaced by natural ecological cycles or sound management practices (<http://www.merriam-webster.com/dictionary/Renewable>)

4. Synthetic fibers Definition:

- Synthetic fibres are made of polymers that do not occur naturally but instead are produced entirely in the chemical plant or laboratory, almost always from by-products of petroleum or natural gas.
synthetic fibre. (2008). In *Encyclopædia Britannica*. Retrieved August 03, 2008, from Encyclopædia Britannica Online:
<http://www.britannica.com/EBchecked/topic/578682/synthetic-fibre>

5. Nonrenewable Energy Definition:

- Nonrenewable energy sources come out of the ground as liquids, gases and solids. Right now, crude [oil](#) (petroleum) is the only naturally liquid commercial fossil fuel. [Natural gas](#) and [propane](#) are normally gases, and [coal](#) is a solid. Coal, petroleum, natural gas, and propane are all considered fossil fuels because they formed from the buried remains of plants and animals that lived millions of years ago. [Uranium](#) ore, a solid, is mined and converted to a fuel. Uranium is not a fossil fuel. These energy sources are considered nonrenewable because they can not be replenished (made again) in a short period of time. Renewable energy sources can be replenished naturally in a short period of time.
<http://www.eia.doe.gov/kids/energyfacts/sources/non-renewable/nonrenewable.html>

6. Social Science Definition:

- Any discipline or branch of science that deals with human behaviour in its social and cultural aspects. The social sciences include cultural (or social) anthropology, sociology, social psychology, political science, and economics. Also frequently included are social and economic geography and those areas of education that deal with the social contexts of learning and the relation of the school to the social order.
social science. (2008). In *Encyclopædia Britannica*. Retrieved August 04, 2008, from Encyclopædia Britannica Online:
<http://www.britannica.com/EBchecked/topic/551385/social-science>

6a. Natural Science Definition:

- any of the sciences (as physics, chemistry, or biology) that deal with matter, energy, and their interrelations and transformations or with objectively measurable phenomena

natural science. (2008). In *Merriam-Webster Online Dictionary*.

Retrieved August 4, 2008, from [http://www.merriam-webster.com/dictionary/natural science](http://www.merriam-webster.com/dictionary/natural%20science)

7. Green Guides – Substantiation Guidelines

- **260.5 Interpretation and substantiation of environmental marketing claims...**reasonable basis consists of competent and reliable evidence. In the context of environmental marketing claims, such substantiation will often require competent and reliable scientific evidence, defined as tests, analyses, research, studies or other evidence based on the expertise of professionals in the relevant area, conducted and evaluated in an objective manner by persons qualified to do so, using procedures generally accepted in the profession to yield accurate and reliable results.

8. TerraChoice Environmental Marketing Inc. (2007). *The Six Sins of Greenwashing*. http://www.terrachoice.com/files/6_sins.pdf

Abstract: In an effort to describe, understand and quantify the growth of greenwashing, TerraChoice Environmental Marketing Inc. conducted a survey of six category-leading big box stores. Through these surveys, 1,018 consumer products were examined, and all but one made claims that are demonstrably false or that risk misleading intended audiences. Based on the survey results, TerraChoice identified six patterns in greenwashing, recognized as the “Six Sins of Greenwashing™”.

9. Getter, L. (2007, November 15). *Ongoing Problems in Sustaining Sustainability*. *The Age*.

Abstract: Global study by the Economist Intelligence Unit, found that 46% of corporations said sustainability programs helped improve brand value. The study compiled the views of 1164 executives from around the world, raised significant questions about business commitment to sustainability and whether actions matched propaganda.

10. Smith, R.A. (2008, May 24). *Shades of Green: Decoding Eco Fashion’s Claims*. *Wall Street Journal*, p.W3.

http://online.wsj.com/public/article/SB121158336716218711.html?mod=2_1356_leftbox

Abstract: Though everyone from Barney’s to Target sells clothes that claim to be green, there is no one standard for Earth-friendliness. This article outlines several claims made by environmentally committed designers and manufacturers and the trade-offs that many consumers are not aware of.

11. Wal-Mart Marketing Claim: Transitional Cotton.

- **Claim:** “For cotton to be certified organic, it must be grown without chemical fertilizers, defoliants or pesticides for at least three years. What about cotton that's newly introduced to the process? It's called transitional cotton. When you buy this transitional-cotton tee, you are practicing a healthier, sustainable lifestyle. Support baby organic cotton”
http://www.walmart.com/catalog/product.do?product_id=8812472

12. United States Department of Agriculture, § 205.202 Land requirements.

“Organic”

- Any field or farm parcel from which harvested crops are intended to be sold, labeled, or represented as “organic,” must: Any field or farm parcel from which harvested crops are intended to be sold, labeled, or represented as “organic,” must:
 - (a) Have been managed in accordance with the provisions of §§205.203 through 205.206;
 - (b) Have had no prohibited substances, as listed in §205.105, applied to it for a period of 3 years immediately preceding harvest of the crop; and (c) Have distinct, defined boundaries and buffer zones such as runoff diversions to prevent the unintended application of a prohibited substance to the crop or contact with a prohibited substance applied to adjoining land that is not under organic management.
- United States Department of Agriculture, **Agricultural Marketing Service, 7 CFR Part 205 [Docket Number: TMD-00-02-FR], RIN: 0581-AA40, National Organic Program, Page 32-33 of 554.** (11) “Transitional Organic” Label. Several commenters requested that the NOP adopt regulations on the conversion of operations to organic production and create a “transitional organic” label. We have not included provisions within the final rule that provide for “transitional organic” labeling. Although many commenters requested that we provide for transition labeling, there does not appear to be sufficient consensus to establish such a standard at this time. Given this lack of consensus, it is unclear what marketplace value such a label might have, and we are concerned that allowing such a label at this point might lead to greater consumer confusion rather than providing clarity.

13. Target Product Claims:

- Product/Claim: Mossimo – Tree Organic Tee
- Fiber Content: 100% cotton.
- http://www.target.com/Mossimo-Tree-Organic-Tee-Black/dp/B0013MANY2/sr=1-1/qid=1217852749/ref=sr_1_1/601-4087130-7204911?ie=UTF8&index=target&field-browse=1041828&rh=k%3AOrganic&page=1

14. Sears Product Claims:

- Product/Claim: Down 2 Earth Short Sleeve Organic Tee - "Look and feel good in this organic cotton crewneck tee."
- Fiber content: 100% Cotton.
- http://www.sears.com/shc/s/p_10153_12605_040S2738000P

15. Kohl's Product Claims:

- Product/Claim: Ek-GO Green Organic Camp Shirt: "Organic cotton construction keeps you cool and comfortable."
- Fiber content: Cotton.
- <http://www.kohls.com/kohlsStore/clearance/mens1/tops/PRD~328337/EkGo+Green+Organic+Camp+Shirt.jsp>

16. Dillard's Product Claims:

- Product/Claim: Eileen Fisher Organic Cotton Tank
- Fiber content: Cotton/spandex.
- <http://www.dillards.com/webapp/wcs/stores/servlet/ProductDisplay?catalogId=301&langId=-1&storeId=301&productId=501519510&Ntk=all&Nty=1&N=1000410&Ntt=Eileen+Fisher+Organic+Cotton+Tank&searchUrl=%2Fendeca%2FendecaStartServlet%3FNtk%3Dall%26Nty%3D1%26N%3D1000410%26Ntt%3DEileen%2BFisher%2BOrganic%2BCotton%2BTank&R=02655597>

17. Gaiam Product Claims:

- Product/Claim: Organic towels: "Wrap yourself in 100% cotton high-impact color with low-impact dyes."
- Fiber content: 100% cotton.
- <http://www.gaiam.com/>

18. Bed Bath and Beyond Product Claims:

- Product: Allergy Luxe Organic Pillow:
- Claim: "Pillow cover is made of 100% certified organic cotton."
- http://www.bedbathandbeyond.com/product.asp?order_num=-1&SKU=14902988

19. Wal-Mart Product Claims:

- Product: Organic 3-Piece Towel Set:
- Claim: 100% certified organic cotton.
- http://www.walmart.com/catalog/product.do?product_id=8342997

20. Nike Product Claims:

- Product: Nike Premium Organic Half-Zip Women's:
- Claim: "Not only does it look fantastic with its sleek silhouette and classic styling, but it's kind to the environment."

- http://www.nike.com/index.jhtml?sitesrc=USLP#!=nikestore,grid,_pdp,cid-1/gid-169210/pid-169212,_grid,s-Nike%20Premium%20basic%20organic%20half&re=US&co=US&la=EN

21. Macy's Product Claims:

- Product: Lauren Ralph Lauren, Spa Organic Flat Sheet:
- Claim: "Sleep easy while contributing to a healthier world."
- http://www1.macys.com/catalog/product/index.ognc?ID=288273&PseudoCat=se-xx-xx-xx.esn_results

22. Nordstrom Product Claims:

- Product: Juicy Couture Puff Sleeve Fleece Hoodie: organic cotton/recycled polyester.
- Claim: "Organic cotton and recycled polyester come together in an adorable eco-friendly hoodie."
- <http://shop.nordstrom.com/S/2927581?Category=&Search=True&SearchType=guidednav&keyword=organic+cotton+in+All+Categories+%3e+Women%27s+Apparel&origin=searchresults>

23. Melillo, W., Miller, S., & Solman, G. (2006). Companies Find It's Not Easy Marketing Green. *Brandweek*, 47(28), 8.

http://www.brandweek.com/bw/eseach/article_display.jsp?vnu_content_id=1002878049

Abstract: The article focuses on the increasing confusion among consumers over green marketing as more companies adopt such campaigns. This has made it harder to create effective environmental marketing efforts, according to a recently released study by Landor Associates in New York.

24. Cotton Incorporated, Textile Consumer Volume 41, Environmentally Friendly Apparel: The Consumer's Perspective, Cotton Incorporated

<http://www.cottoninc.com/TextileConsumer/Textile-Consumer-Vol-41/>

25. (2007, May 25). Sustainability Lacks Meaning for Many Consumers: Hartman Report. *Progressive Grocer*.

Abstract: The term "sustainability", while widely used by the media and industry, holds little to no meaning for consumers, according to the newest report released by the Hartman Group. Recently, the Hartman Group released a new report, Sustainability: Understanding the Consumer Perspective, which examines the understanding consumers have of "sustainability" and how these issues correlate to shopping and consumption patterns.

26. Scott, M. (2008, February 16). Not so Green After All. *The Gazette*, p.H1.

Abstract: Companies have become so adept at making themselves and their products look more environmentally friendly than they really are, the practice has its own name: greenwashing. This article outlines several terms that are often

used to describe environmentally friendly products and the varying definitions for consumers.

27. O’Leary, Patricia Frazier, PhD. Speech, FTC “Green Building and Textiles Workshop, Cotton Incorporated, July 15, 2008

- Presentation and PowerPoint Slides:
http://www.vodium.com/Mediapod/mediapod.asp?Event=MediaPod&Filename=pn100383_ftc89h8wl5b.vdf&SessionArgs=0A1U0000000100000111&ScreenHeight=768&ScreenWidth=1024
- Transcript:
http://htc-01.media.globix.net/COMP008760MOD1/ftc_web/transcripts/071508_greenBuilding_sess1.pdf

28. Kavilanz, P.B. (2008, April 23). The High Price of Going Organic. *CNN Money*. WSL Strategic Retail.

http://money.cnn.com/2008/04/23/news/companies/organics_backlash/index.htm

Abstract: While many companies are now rushing to “go green,” recent studies surveys show that American consumers are getting turned off by the organic hype for three reasons: price, skepticism and confusion.

29. Crane, A. (2000). Facing the Backlash: Green Marketing and Strategic Reorientation in the 1990s. *Journal of Strategic Marketing*, 8, 277-296.

Abstract: Literature suggests that a consumer backlash against green marketing has occurred. This backlash has been created by perceived problems in the areas of green product performance and green claims in the late 1980’s and 1990’s. Evidence is reported from a qualitative study which investigated corporate perceptions of this context and revealed the strategic orientations which have subsequently been employed by green marketers.

**Supplementary References:
(Not cited in document)**

1. International Market for Sustainable (Green) Apparel

Date: May 2008

Published by: Just-Style

<http://www.just-style.com/store/product.aspx?id=64242&lk=ss>

Abstract: The greening of the apparel industry is a significant and evolving trend that is likely to affect every facet of this enormous global industry. Under both internal and external pressure to reduce the environmental impact of growing, processing, treating and dyeing fibers to eliminate exploitation and inequities in labor practice, textile and apparel companies are eager to show consumers a new, sustainable approach to fashion without sacrificing style or profit. Consumer awareness is creating a heightened sensitivity to all dimensions of ethical production. As a result, companies must avoid “greenwashing” and create transparent, consistent and substantive sustainability and social responsibility initiatives. However, lack of standards and regulation, a proliferation of claims and labels, leaves room for very broad interpretations of sustainable apparel.

2. The Hartman Report on Sustainability: Understanding the Consumer Perspective

Date: April 2007

Published by: The Hartman Group

<http://www.hartman-group.com/publications/view/3>

Abstract: There are strong indications that a host of issues related to sustainability have become mainstream concerns to masses of American consumers. This report examines the understanding consumers have of “sustainability” and how issues related to sustainability become manifest (or not) in the context of everyday life and in relation to shopping and consumption practices. Few consumers have deep or extensive knowledge of expert, policy, or corporate discourses related to sustainability and sustainability development. Research clearly reveals that a cultural shift is taking place in terms of consumer awareness, acceptance and practices that relate to sustainability.

3. Green Marketing

Date: May 2008

Published by: Mintel

http://reports.mintel.com/sinatra/reports/search_results/show&&type=RCItem&page=0&noaccess_page=0/display/id=295918

Abstract: “Green” messages have swept the marketing world over the past several years. In turn, marketers have caught on to the benefits that green messaging can bring to their brands. The report includes exclusive research into consumer views on green companies, green advertising and green branding.

The growth of green media and the development of clear and consistent standards for environmental performance across industries are identified as potential drivers of growth in green marketing.

4. Green Living

Date: February 2008

Published by: Mintel

<http://reports.mintel.com/sinatra/reports/display/id=295904#about>

Abstract: In this report, Mintel examines the size, scope, and growth of the “green” consumer marketplace, as well as the driving forces that will shape its future, with an eye toward expected changes sector by sector, as well as the short-term and long-term outlooks for the market as a whole. Consumer research identifies four types of green consumers and moves beyond demographic categories to explore how “green” consumers think, identifying the lifestyle choices and personality characteristics that most closely relate to “green” behavior.

Attachments

-Listed by Reference
Number

Reference #8

The “Six Sins of Greenwashing™”

A Study of Environmental Claims in North American Consumer Markets



A 'Green Paper' by
TerraChoice Environmental Marketing Inc.
(November 2007)



terrachoice
environmental marketing

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The “Six Sins of Greenwashing™”

A Study of Environmental Claims in North American Consumer Markets

Green·wash (grēn'wōsh', -wōsh') – verb: the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service.

Overview

The recent surge of environmental awareness in North America is unmistakable. It has been documented by many researchers and widely reported in the popular press. The rise in “green” marketing claims has also been well documented. Less studied is the apparent increase in “greenwashing” – false or misleading green marketing claims.

In an effort to describe, understand, and quantify the growth of greenwashing, TerraChoice Environmental Marketing Inc. conducted a survey of six category-leading big box stores. Through these surveys, we identified 1,018 consumer products bearing 1,753 environmental claims. Of the 1,018 products examined, all but one made claims that are demonstrably false or that risk misleading intended audiences.

Based on the survey results, we identified six patterns in the greenwashing, which we now recognize as the “Six Sins of Greenwashing™”.

Of the 1,018 products reviewed, all but **one** committed at least one of the Six Sins of Greenwashing.

These findings suggest that greenwashing is pervasive, the consequences of which are significant:

- Well-intentioned consumers may be misled into purchases that do not deliver on their environmental promise. This means both that the individual consumer has been misled and that the potential environmental benefit of his or her purchase has been squandered.
- Competitive pressure from illegitimate environmental claims takes market share away from products that offer more legitimate benefits, thus slowing the penetration of real environmental innovation in the marketplace.
- Greenwashing may create cynicism and doubt about all environmental claims. Consumers – particularly those who care most about real environmental progress – may give up on marketers and manufacturers, and give up on the hope that their spending might be put to good use. This would eliminate a significant market-based, financial incentive for green product innovation and leave committed environmental advocates with government regulations as the most likely alternative.



The “Six Sins of Greenwashing™”

1. Sin of the Hidden Trade-Off
2. Sin of No Proof
3. Sin of Vagueness
4. Sin of Irrelevance
5. Sin of Fibbing
6. Sin of Lesser of Two Evils



Research Methodology

In the spring of 2007, TerraChoice sent research teams into six category-leading big box stores with instructions to record every product-based environmental claim they observed. We instructed the teams that, for each environmental claim, they should identify the product, the nature of the claim, any supporting information, and any references offered for further information.

After recording 1,753 environmental claims on 1,018 products (refer to Appendix A), we tested the claims against current best practices in environmental marketing. The sources for these best practices include the International Organization for Standardization (ISO)¹, the U.S Federal Trade Commission², U.S Environmental Protection Agency³, Consumers Union⁴, and the Canadian Consumer Affairs Branch⁵.

Finally, we studied the resulting list of false or misleading claims for patterns and lessons. We have come to call these patterns the “Six Sins of Greenwashing”. Of the 1,018 products that made environmental claims, all but one committed at least one of the Six Sins.

Defining and Quantifying the Six Sins of Greenwashing

Based on our analysis, we categorized the false or misleading environmental claims into the following “Six Sins of Greenwashing”:

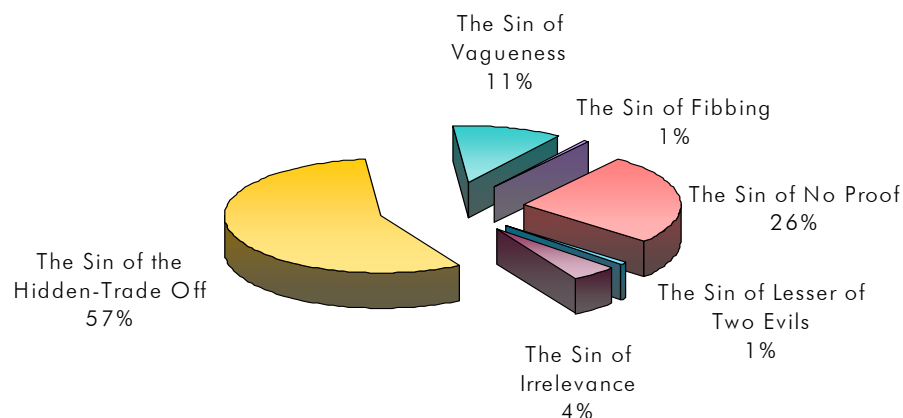
- **Sin of the Hidden Trade-Off** – The Sin of the Hidden Trade-off is committed by suggesting a product is “green” based on a single environmental attribute (the recycled content of paper, for example) or an unreasonably narrow set of attributes (recycled content and chlorine free bleaching) without attention to other important, or perhaps more important, environmental issues (such as energy, global warming, water, and forestry impacts of paper). Such claims are not usually false, but are used to paint a “greener” picture of the product than a more complete environmental analysis would support.

Here are some examples from the research:

Examples:

- ◆ Paper (including household tissue, paper towel, and copy paper) and lumber products (such as framing products and plywood) that promote their recycled content or sustainable harvesting practices without attention to manufacturing impacts such as air emissions, water emissions, and global warming impacts.
- ◆ Household insulation products (such as batt insulation products for home renovation products) that claim indoor air quality benefits without attention to other environmental aspects such as recycled content and manufacturing impacts.

Sins Committed by Category





The Six Sins Of Greenwashing™

- ◆ Office technology (printers, copiers, fax machines) that promote energy efficiency without attention to hazardous material content, indoor air quality, or compatibility with recycled paper or remanufactured toner cartridges.
- ◆ Other product claims that committed this sin include ink cartridges, laundry detergents, dish detergent, air fresheners, bathroom cleaners, markers, flooring laminate, bags, multi-purpose cleaners, wood panels, and pesticides.

The Sin of the Hidden Trade-off was the most frequently committed sin in the study, made by 57% of all environmental claims.

□ **Sin of No Proof** – Any environmental claim that cannot be substantiated by easily accessible supporting information, or by a reliable third-party certification, commits the Sin of No Proof. (For this research, we determined there to be ‘no proof’ if supporting evidence was not accessible at either the point of purchase or at the product website.)

Among others, our research found these examples of the Sin of No Proof:

- ◆ Household lamps and lights that promote their energy efficiency without any supporting evidence or certification.
- ◆ Personal care products (such as shampoos and conditioners) that claim not to have been tested on animals, but offer no evidence or certification of this claim.
- ◆ Facial tissues and paper towels that claim post-consumer recycled content without providing evidence.

We found a total of 454 products and approximately 26% of the environmental claims committed the Sin of No Proof; making it the second most frequently committed sin.

□ **Sin of Vagueness** – The Sin of Vagueness is committed by every claim that is so poorly defined or broad that its real meaning is likely to be misunderstood by the intended consumer.



This mobius loop is intended to mean that the product is made from recycled material. But is it the whole product, or the package? And is it made of 100% recycled material, or less? And is it post-consumer waste, or post-industrial waste? Without a qualifying statement, the symbol is likely to mislead the buyer, committing the Sin of Vagueness.

There are some recurring themes within these vague claims. For example:

- ◆ “Chemical-free”. In fact, nothing is free of chemicals. Water is a chemical. All plants, animals, and humans are made of chemicals as are all of our products.
- ◆ “Non-toxic”. Everything is toxic in sufficient dosage. Water, oxygen, and salt are all potentially hazardous.
- ◆ “All Natural”. Arsenic is natural. So are uranium, mercury, and formaldehyde. All are poisonous.
- ◆ “Green”, “Environmentally friendly”, and “Eco-conscious” (to name just a few) which are utterly meaningless without elaboration.

Some product examples from the research:

- ◆ Garden insecticides promoted as “chemical-free”.
- ◆ “Natural” hair mousse.
- ◆ Kitchen (wax) paper that claims “recycled content” but does not quantify it (Would 0.1% qualify?)



The Six Sins Of Greenwashing™

- ◆ General purpose household cleaners that claim to be “non-toxic” without explanation or third-party substantiation.
 - “100% natural” bathroom cleaners.

In our research sample, 196 individual products (or 11% of the environmental claims) committed the Sin of Vagueness.

□ **Sin of Irrelevance** – The Sin of Irrelevance is committed by making an environmental claim that may be truthful but is unimportant and unhelpful for consumers seeking environmentally preferable products. It is irrelevant and therefore distracts the consumer from finding a truly greener option.

The most frequent example of an irrelevant claim relates to chlorofluorocarbons (CFCs) – a principal contributor to ozone depletion. Since CFCs have been legally banned for almost 30 years, there are no products that are manufactured with it. Nevertheless, we found many individual products that presented CFC-free claims as an apparently unique environmental advantage. They included:

- ◆ CFC-free insecticides,
- ◆ CFC-free lubricants,
- ◆ CFC-free oven cleaners,
- ◆ CFC-free shaving gels,
- ◆ CFC-free window cleaners,
- ◆ CFC-free disinfectants.

The Sin of Irrelevance accounted for 78 products and 4% of the environmental claims.



CFCs have been legally banned for almost 30 years, yet many products still claim CFC-free as if it is a unique competitive advantage.

□ **Sin of Lesser of Two Evils** – These are “green” claims that may be true within the product category, but that risk distracting the consumer from the greater environmental impacts of the category as a whole. Examples include:

- ◆ Organic cigarettes.
- ◆ “Green” insecticides and herbicides.

Obviously, there are some circumstances and consumers that demand these products. Commercial insecticides and herbicides are essential to some agricultural applications. In those circumstances, choosing the greenest option is essential. However, insecticides and pesticides may be unnecessary for many cosmetic applications (such as lawns). Organic tobacco may be a more responsible choice for smokers, but shouldn’t most consumers be discouraged from smoking in the first place?

We consider a claim to commit the Sin of Lesser of Two Evils when environmental qualifiers such as “organic” or “green” are placed on products in which the entire product category is of questionable environmental value.

In this study, 17 products and approximately 1% of environmental claims committed the Sin of Lesser of Two Evils.

□ **Sin of Fibbing** – The Sin of Fibbing is committed by making environmental claims that are simply false.

In our findings, only a few products were found to commit the Sin of Fibbing. Most of these were misuse or misrepresentation of certification by an independent authority. These cases included, for example:

- ◆ Several shampoos that claimed to be “certified organic”, but for which our research could find no such certification.
- ◆ A caulking product that claims to be “Energy Star” registered, but the official Energy Star website suggests this is false.
- ◆ A dishwasher detergent that purports to be packaged in “100% recycled paper”, and yet the container is plastic.



10 products (less than 1% of environmental claims) committed the Sin of Fibbing, making it one of the two least frequently committed sins.

Recommendations for Consumers

Governments and standard-setting bodies have attempted to discourage greenwashing. In North America, both the US Federal Trade Commission⁶ and the Canadian Consumer Affairs office⁷ have issued guidelines for proper use of environmental claims. Under ISO 14024, the International Organization for Standardization establishes guidelines for proper use of environmental information.⁸ But it is our observation that when environmental interest is high, as it is today, greenwashing is nevertheless prolific.



Multi-Attribute Versus Single-Attribute Claims

When seeking environmentally preferable products, it is important to look at multiple environmental considerations rather than just single environmental issues.

As an analogy, when attempting to identify healthier food choices, it can be useful to look at calorie content. It is more helpful, however, to also examine fat, sugar, and vitamin content.

The most respected environmental claims incorporate multiple environmental considerations throughout every phase of a product's life-cycle, which includes the environmental impacts of the raw materials, manufacturing process, the product itself, and its ultimate disposal.

Single-attribute claims look at only a single environmental issue such as recycled-content or energy-efficiency. While important, single attribute claims can hide important additional environmental considerations.

If the good intentions of consumers and the environmental benefits of their choices are not to be squandered, consumers themselves will have to play a role. Here are some suggestions that arise from this study.

1. Look for Eco-labels.

Eco-labelling – standardized by ISO 14024 and recognized around the world – arose as an answer to earlier efforts of greenwashing. They remain one of the most useful tools to avoid greenwashing. Look for products that have been certified by a qualified and independent third-party such as EcoLogo^{CM} or Green Seal. Both EcoLogo^{CM} and Green Seal develop standards for environmental leadership in an open, transparent consensus-based process that considers multiple environmental issues throughout a product's lifecycle (from resource extraction to end-of-life). These programs deliver a shortcut to "greener" products through:

- Clear public standards for environmental leadership in each product category;
- Third-party verification that each certified product meets the applicable standards;
- Ongoing surveillance auditing to ensure continued compliance;
- Public listings of certified products.

Additional information on other environmental standards is included in Appendix B.

Example of Multi-Attribute Eco-labels:



EcoLogo^{CM}
www.ecologo.org



Green Seal
www.greenseal.org



The Six Sins Of Greenwashing™

2. Look For Evidence of Any of the “Six Sins” By Asking the Following Questions:

- a) Is the “green” claim restricted to just one, or a narrow set of environmental issue(s)? (**The Sin of the Hidden Trade-Off.**) If so, you might look for other information that gives a more complete picture of the environmental impact of the product. “Okay, this product comes from a sustainably harvested forest, but what are the impacts of its milling and transportation? Is the manufacturer also trying to reduce those impacts?” *Emphasizing* one environmental issue isn’t a problem (indeed, it often makes for better communications). *Hiding* a trade-off between environmental issues is a problem.
- b) Does the claim help me find more information and evidence? (**The Sin of No Proof.**) It may not be reasonable to expect a product label or a point-of-purchase brochure to provide detailed scientific explanations of a green claim. It is reasonable to expect a product label or brochure to direct you to where you can find further evidence. Good green marketing helps the consumer find the evidence and learn more. Company websites, third-party certifiers, and toll-free phone numbers are easy and effective means of delivering proof.
- c) Is the environmental and scientific meaning of the claim specific and self-evident? If not, is the specific meaning given? (**The Sin of Vagueness.**) Products with names like “eco-gadget” and “natur-widget” aren’t necessarily making false or misleading claims, but they should cause you to be suspicious. If the marketing claim doesn’t explain itself (“here’s what we mean by ‘eco’ ...”), the claim is vague and meaningless. Similarly, watch for other popular vague green terms: “non-toxic”, “all-natural”, “environmentally-friendly”, and “earth-friendly.” Without adequate explanation, such claims are so vague as to be meaningless.
- d) Could all of the other products in this category make the same claim? (**The Sin of Irrelevance.**) The most common example is easy to detect: “CFC-free” is a meaningless claim. It is irrelevant because no products are manufactured with chlorofluorocarbons. Other cases may be harder to detect. Ask yourself if the claim is important and relevant to the product. (If a light bulb claimed water efficiency benefits you should be suspicious.) Comparison-shop (and ask the competitive vendors). If the claim seems illogical and disconnected from the product, it may very well be irrelevant.
- e) When I check up on it, is the claim true? (**The Sin of Fibbing.**) This sin can be difficult to detect. The most frequent examples in this study were false uses of third-party certifications. Thankfully, these are easy to confirm. Legitimate third-party certifiers – EcoLogo^{CM}, Chlorine Free Products Association (CFPA), Forest Stewardship Council (FSC), Green Guard, Green Seal (for example) – all maintain publicly available lists of certified products. Some even maintain fraud advisories for products that are falsely claiming certification.
- f) Is the claim trying to make consumers feel “green” about a product category that is of questionable environmental benefit? (**The Sin of the Lesser of Two Evils.**) Consumers concerned about the adverse effects of tobacco and cigarettes would be better served by quitting smoking than by buying organic cigarettes. Similarly, consumers concerned about the human health and environmental risks of excessive use of lawn chemicals might create a bigger environmental benefit by reducing their use than by looking for greener alternatives.



Recommendations for Marketers

Green marketing is a vast commercial opportunity, and should be. When it works – when it is scientifically sound and commercially successful – it is an important accelerator toward environmental sustainability. The purpose of this study is not to discourage green marketing, nor to indict particular marketers. Our purpose is to help marketers improve their claims so that:

- Genuinely “greener” products excel;
- Competitive pressure from illegitimate green claims is diminished;
- Consumers do not become jaded and unduly skeptical of green claims; and,
- Marketers employ environmental concerns to establish honest, trustworthy, and long-lasting dialogue with their customers.

Green marketers and consumers are learning about the pitfalls of greenwashing together. This is a shared problem and opportunity.

The Six Sins of Greenwashing does NOT suggest that only perfectly “green” products should be marketed as environmentally preferable. First of all, there is no such thing as a perfectly “green” product. Environmentally preferable products are “greener” not “green”, and marketing them as such is entirely fair. Second, environmental progress is necessarily stepwise. Not only should incrementally “greener” innovations and products be encouraged, consumers should and will reward stepwise progress.

Avoiding greenwashing does not require waiting for a perfect product. It does mean that sound science, honesty, and transparency are paramount.

Green marketers and consumers are learning about the pitfalls of greenwashing together. This is a shared problem and opportunity.

The Six Sins suggest a number of specific guidelines for marketers, outlined below.

- 1) Avoiding the Sin of the Hidden Trade-Off
 - a) **Do** understand all of the environmental impacts of your product across its entire lifecycle.
 - b) **Do** emphasize specific messages (particularly when you know your audiences care about those issues) but don't use single issues to distract from other impacts.
 - c) **Do** pursue continual improvement of your environmental footprint (across the entire lifecycle), and encourage your customers to join you on that journey.
 - d) **Do** draw on multi-attribute eco-labeling standard and certification programs, such as EcoLogo^{CM} and Green Seal for legitimacy of environmental claims.
 - e) **Don't** make claims about a single environmental impact or benefit, without knowing how your product performs in terms of its other impacts, and without sharing that information with your customers.
- 2) Avoiding the Sin of No Proof
 - a) **Do** understand and confirm the scientific case behind each green marketing claim.
 - b) **Do** provide evidence to anyone that asks, OR rely on third-party certifications such as EcoLogo^{CM} and Green Seal (since those standards are public).
- 3) Avoiding the Sin of Vagueness
 - a) **Do** use language that resonates with your customer, as long as that language is truthful.
 - b) **Do** use caution in your use of the recycling/recyclable symbol (the mobius loop). Its use is so widespread and confused that it has become largely meaningless.
 - c) **Don't** use vague names and terms (such as environmentally-friendly) without providing precise explanations of your meaning.
 - d) **Don't** use the terms “chemical-free” and “all-natural”.



The Six Sins Of Greenwashing™

- 4) Avoiding the Sin of Irrelevance
 - a) **Don't** claim CFC-free, because it is not a legitimate point of competitive differentiation.
 - b) **Don't** claim any environmental benefit that is shared by all or most of your competitors.
- 5) Avoiding the Sin of the Lesser of Two Evils
 - a) **Do** help each customer find the product that is right for them, based on their needs and wants.
 - b) **Don't** try to make a customer feel "green" about a choice that is basically harmful or unnecessary.
- 6) Avoiding the Sin of Fibbing
 - a) **Do** tell the truth. Always.
 - b) **Always** tell the truth.

Concluding Thoughts

Green marketing is a powerful convergence between green buyers and sellers . More and more consumers expect to use their spending as an expression of their environmental commitment. More and more businesses are establishing environmental performance as a point of competitive distinction and social responsibility. When genuine environmental leadership is rewarded in the marketplace (with market share, price premiums, public respect, and increased visibility), it motivates all products to improve. It uses competition and free enterprise to pull the economy toward sustainability.

With that in mind, the purpose of this study is not to discourage green marketing, nor to indict particular marketers. It is not intended to scare consumers away from green claims. Our purpose is to assist marketers and consumers to build a more honest and effective dialogue about the environmental impacts of products.

Although our findings - the Six Sins of Greenwashing – may seem bleak, green marketers and consumers are learning about the pitfalls of greenwashing together. This is a shared problem and opportunity. When green marketing overcomes these challenges, consumers will be better able to trust green claims and genuinely environmentally preferable products will penetrate their markets more rapidly and deeply. This will be great for consumers, great for business, and great for the planet.

We expect to repeat this research annually, and look forward to these positive developments.



The "Six Sins of Greenwashing™"

1. Sin of the Hidden Trade-Off
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5. Sin of Fibbing
6. Sin of Lesser of Two Evils

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environmental marketing

This "Green Paper" was prepared by TerraChoice Environmental Marketing. Are you curious about the results? Interested in learning more? Would you like to speak to anyone at TerraChoice? Please visit www.terrachoice.com/sixsinsofgreenwashing for more information.

APPENDICES

APPENDIX A — Product Categories In Which Environmental Claims Were Found

- Air Fresheners
- Appliances
- Automotive Cleaner
- Bags
- Bathroom Cleaner
- Body Lotion
- Carpet Cleaner
- Caulking
- Conditioner
- Degreaser
- Deodorant
- Dish Detergent
- Disinfectant Sprays
- Envelopes
- Envelopes
- Fabric Softener
- Facial Tissues
- Floor Cleaner
- Flooring
- Foam Bath
- Furniture Polish
- Gel
- Glass Cleaner
- Green Product Section
- Hairspray
- Hand Lotion
- Hand Soap
- Herbicides
- Ink Cartridges
- Insect/Pesticides
- Insulation
- Laundry Detergent
- Light Bulbs
- Lighting
- Lubricant
- Mousse
- Mouth Wash
- Multi Purpose Cleaner
- Oven Cleaner
- Packaging Materials
- Paint
- Paper
- Portfolios
- Printers/copiers
- Scrub Pads
- Serviettes
- Shampoo
- Shaving Gel
- Shipping Boxes
- Stainless Steel Polish
- Televisions
- Toilet Tissue
- Toothpaste
- Wood (panels)
- Wraps
- Writing Instruments

APPENDIX B — Eco-labels

Consumers can avoid greenwashing by seeking products that are certified to meet legitimate environmental standards such as EcoLogo^{CM} or Green Seal. There are, however, a growing number of additional environmental standards and claims being made.

When comparing environmental standards, consumers would be wise to ask the following questions:

(1) What type of environmental claim is being made?

Is the manufacturer making a claim about a single environmental attribute such as energy efficiency or recycled-content or is the manufacturer making a broader multi-attribute claim that the product meets an environmental leadership standard? While incredibly valuable, single-attribute environmental claims do not address other potentially important human health and environmental issues.

Environmental leadership standards such as EcoLogo^{CM} and Green Seal examine all of the relevant environmental impacts of a product category along with the products currently available in the market when developing a standard. Leadership standards generally are designed so that only the top 20 percent of products in a category can meet it. This allows sufficient competition within the leadership category to help keep prices competitive while still being protective of human health and the environment.

(2) Is a copy of the environmental standard or testing protocol available for review?

If a manufacturer can not or refuses to provide a copy of the environmental standard or testing protocol, one might suspect that the claim is only a marketing ploy. When they do provide a copy of the standard, review it carefully to determine if it references appropriate national or international environmental and performance standards.

Standard and testing protocols should have a clear and consistent meaning. They should be meaningful and verifiable. Good standards and protocols are designed so that anyone unaffiliated with the standard should be able to read it, interpret it, and know how to evaluate products against it. They should also be designed to ensure consistent evaluation results, meaning that different reviewers would likely reach the same conclusion about whether a product meets the standard or not.

In addition, multi-attribute environmental leadership standards should be based on human health and environmental considerations throughout the lifecycle of the product from raw material extraction, manufacture, use, and ultimate disposal of the product. The lifecycle stages considered and covered by the standard should be explicitly stated.

(3) How was the environmental standard or testing protocol developed?

It is preferable that standards and testing protocols be developed in an open, public, transparent process similar to the way ANSI, ASTM, ISO 14024 or other public standards are developed. The standard setting organization should make records of the standard development process available for review.

(4) Who developed the environmental standard or testing protocol?

The most trusted standards are those developed in a consensus-based process by broad stakeholder groups. Standards developed consistently with ISO 14024 protocols will make a list of stakeholder groups available upon request. Consumers should be less trustful of standards developed by an individual manufacturer or trade association because of potentially unmitigated conflicts of interest.

(5) What process is used to verify that products actually meet the standard or passed the testing requirements?

There are a variety of procedures to verify that a product meets a standard. Some are more rigorous (and can be more expensive for the manufacturer), but provide a greater degree of assurance. The standard verification procedures range (from most rigorous to least rigorous) as follows:

- Independent third-party certification with on-site audits – An independent organization verifies the products meet the standards based on a review of the product, additional information provided by the manufacturer, and after an onsite visit to verify the accuracy of the information provided by the manufacturer.
- Independent third-party certification – An independent organization verifies the products meet the standard based on a review of the product and additional information provided by the manufacturer.
- Self registration with random audits – Individual companies identify products meeting the environmental standard on their own without any preliminary review, but the standard setting organization or other independent auditors conduct random audits after products are registered to ensure compliance.
- Self registration – Individual companies identify products meeting the environmental standard on their own without any outside review.

It is important to note that a stringent verification process is relatively meaningless if the standard itself is not meaningful.

Widely Accepted Environmental Standards:

Multi-Attribute Standard Setting and Certification Organizations

These programs examine multiple environmental issues throughout the entire lifecycle of a product, which includes the environmental impacts associated with the collection of raw materials, the manufacturing process, the impacts of the product during its use, and the impacts when the product is ultimately recycled or disposed of. Before earning certification, an independent third-party auditor must verify that products actually meet the publicly-available standard.

- [EcoLogo <www.ecologo.org>](http://www.ecologo.org)

EcoLogo^{CM} is North America's oldest and most widely known environmental leadership standard. The EcoLogo^{CM} website includes more than 120 environmental standards and almost 7,000 certified products (stock-keeping units or SKUs). Purchasers are using the site to research or develop purchasing specifications and to put together potential bidder lists. EcoLogo^{CM} is the only program in North America to have been accredited by the Global Eco-Labeling Network. It is a Type I eco-label according to ISO, and addresses all of the environmental attributes of the product.

- [Chlorine Free Products Association <www.chlorinefreeproducts.org>](http://www.chlorinefreeproducts.org)

CFPA certifies paper and tissue products meeting its multi-attribute standard.

- [Green Seal <www.greenseal.org>](http://www.greenseal.org)

Green Seal standards provide leadership criteria for the development of many types of products and services. The Green Seal website includes a list of all of the Green Seal-certified products and services with links to the manufacturers and providers.

Single Attribute Environmental Standard Setting and Certification Organization

These programs focus on a single environmental issue such as indoor air quality or recycled content. Before earning certification, an independent third-party auditor must verify that products meet the publicly-available standard.

- Forest Stewardship Council <www.fscus.org>

The Forest Stewardship Council certifies wood products obtained from sustainably harvested forests. It also certifies environmentally preferable papers based on a multi-attribute approach.

- Green-e <www.green-e.org>

Green-e certifies sources of renewable electricity and renewable energy credits generated from clean energy sources such as wind, solar, or small-scale hydro-electric. It also certifies products that were manufactured in facilities using renewable energy.

- GREENGUARD <www.greenguard.org>

GREENGUARD focuses exclusively on indoor air quality issues. Its website includes certified products in more than 15 different categories, from paint to baby cribs and mattresses to cleaning systems, flooring, adhesives, wall coverings, HVAC ductwork, window treatments, countertops, tiles, cabinets, and office furnishings. Today, there are over 120 manufacturers participating in the testing program with more than 150,000 products are certified.

Additional Environmental Standards

Other programs allow manufacturers to declare their products meet a publicly available standard. They then conduct random audits to maintain the integrity of the environmental declarations. The existence of the public standards also allows others to independently verify the accuracy of the claims.

- Energy Star Program <www.energystar.gov>

The U.S. Federal Government's Energy Star program establishes energy-efficiency criteria for a wide variety of products in more than 40 product categories. The site lists all of the products meeting the efficiency requirements. It also includes recommended purchasing specifications and online training resources.

- EPEAT <www.epeat.net>

EPEAT ranks computer desktops, laptops, and monitors into EPEAT Bronze, Silver, or Gold categories based on more than 50 environmental criteria. There are currently more than 600 products from 23 manufacturers on the EPEAT registry.

APPENDIX C — References

¹ http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=23145

^{2,6} <http://www.ftc.gov/be/v970003.shtm>

³ <http://www.epa.gov/epp/pubs/claims.htm>

⁴ <http://www.greenerchoices.org/eco-labels/eco-home.cfm>

^{5,7} http://consumer.ic.gc.ca/epic/site/oca-bc.nsf/en/h_ca02302e.html

Reference #11



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Features & Specifications

For cotton to be certified organic, it must be grown without chemical fertilizers, defoliants or pesticides for at least three years. What about cotton that's newly introduced to the process? It's called transitional cotton. When you buy this transitional-cotton tee, you are practicing a healthier, sustainable lifestyle. Support baby organic cotton

- Front graphic
- Crew nec
- Short sleeves
- Color: Charcoal

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Features & Specifications

For cotton to be certified organic, it must be grown without chemical fertilizers, defoliants or pesticides for at least three years. **What about cotton that's newly introduced to the process? It's called transitional cotton.** When you buy this transitional-cotton tee, you are practicing a healthier, sustainable lifestyle. Support baby organic cotton

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- Classic Fit
- Straight Hem
- Made of 100% Cotton; Tumble Dry, Machine Wash
- Knit

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free shipping with minimum purchase

Mossimo[®] Tree Organic Tee - Black

clearance

\$10.49 - \$11.89

List price: ~~\$14.99~~—~~\$16.99~~

Select Size

Quantity:

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Size charts

Down 2 Earth

Down 2 Earth Boy's 8-20 Short Sleeve Organic Tee, Ecopunk Peace

In stock

Select Fit: Regular

Regular

Select Color: Olive



Select Size: Small

Small

Price Match Policy



Remember to use \$1.99 Shipping and For The Home Offer ends 16-A See Details | See

When will it arrive? Please allow 2 b Shipping varies by location

Fit: Regular, Size: Small, Color: Olive

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Save 50 % thru 08/09/08

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Overview | Options | Reviews(0)

Look and feel good in this organic cotton crewneck tee. The front features a hip, peace and recycle message giving you a look that's going green. Short sleeves. Rib-knit crewneck. 100% Cotton. Machine washable. Imported.

Overview | Options | Reviews(0)

Look and feel good in this organic cotton crewneck tee. The front features a hip, peace and recycle message giving you a look that's going green. Short sleeves. Rib-knit crewneck. 100% Cotton. Machine washable. Imported.

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Ek-Go Green Organic Camp Shirt



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Ek-Go Green Organic Camp Shirt

orig. \$40.00
more colors, patterns available

Select Color:



Select Size:



[Size & Fit Information](#)

Quantity:

E-mail to a friend

Save the planet. You'll feel great with this environmentally friendly men's camp shirt. Short sleeves.

- Double front pockets and earth-tone design offer a rugged look.
- Button front makes layering a breeze.
- Side vents allow you to wear it untucked.
- Relaxed cut gives you room to move.
- **Yarn-dyed** organic cotton construction keeps you cool and comfortable.
- Details:
 - Button front
 - 2-pocket
 - Cotton
 - Machine wash
 - Imported

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- Eileen Fisher
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Eileen Fisher Organic Cotton Tank

Teal scoopneck tank. In stretch cotton/Lycra® spandex. Made in the USA of imported fabric.

02655597

\$68.00

Add your item(s) below:

Color: Teal

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Teal scoopneck tank. In stretch cotton/Lycra® spandex. Made in the USA of imported fabric.

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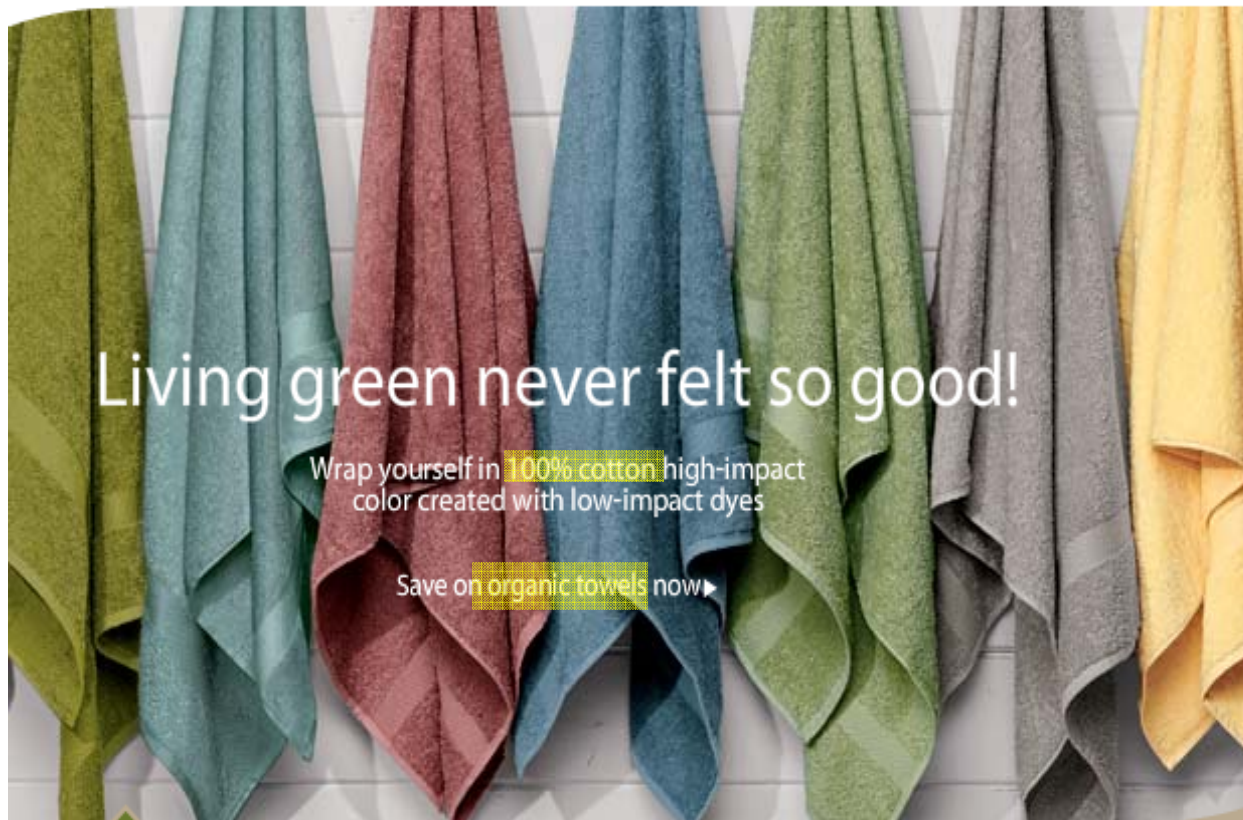
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Bedding > Pillows > **Synthetic Fill**

Synthetic Fill: << 9 of 38 >>

Product guide : Pillows

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Exclusively oursSM

Allergy Luxe[®] Organic Standard/Queen Pillow, 100% Cotton, 300 Thread Count

The hypoallergenic pillow has an inner lining with an effective anti-allergen barrier weave that protects against dust mites as well as most household and pet allergens. Pillow cover is made of 100% certified organic cotton cover using 100% vegetable dye. 300 thread count. Measures 20" x 28". Polyester filled. Machine wash. Imported.

Related items



[Royal Velvet White Down Pillow, 100% Cotton, 400 Thread Count](#)



[Allergy Luxe[®] Premium Down Alternative Mattress Pad, 300 Thread Count](#)



[Allergy Luxe[®] Down Alternative Comforter with Premium Allergen Barrier Fabric](#)

pet allergens. Pillow cover is made of 100% certified organic cotton cover using

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Description	Available color	Price	Qty
Allergy Luxe [®] Organic Standard/Queen Pillow, 100% Cotton, 300 Thread Count	Natural	\$39.99 ea.	<input type="text" value="1"/>

Shipping costs

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\$14.88



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Delivery Options:

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Information below:

- [Features & Specifications](#)
- [Customer Product Reviews](#)
- [Gifting Options](#)
- [Payment Options](#)
- [Shipping & Delivery](#)

Product Details:

- 100% certified organic cotton
- Certified organic dyes

Features & Specifications

This 100% organic cotton, 3-piece towel set in white with blue-gray accents is the ultimate in eco-friendly luxury. Two-ply construction offers increased durability and absorbency.

Product Details:

- 100% certified organic cotton
- Certified organic dyes
- 2-ply construction for increased durability and absorbency
- Bath towel: 30" x 54"
- Hand towel: 16" x 27"
- Washcloth: 13" x 13"
- Made in the USA

Shipping Weight (in pounds):	1.95
Assembled in Country of Origin:	USA and/or Imported
Origin of Components:	USA and/or Imported
Wal-Mart No.:	002079546

[Top of Page](#)

Nike Premium Basic Organic Half-Zip Women's ...

\$60.00

STYLE# 268167 COLOR# 457

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1. Color: Pale Blue/Dark Grey Heather/Dark Army

6 Colors



2. Select Size

3. Qty 1

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Overview

Sizing

You'll feel great in the Nike Premium Basic Organic Half-Zip Women's Hoodie. Not only does it look fantastic with its sleek silhouette and classic styling, but it's kind to the environment.

- Ribbed cuffs and hem
- Front pouch pocket
- Fabric: 100% cotton (100% organic)

You might also like:



silhouette and classic styling, but it's kind to the environment.



larger image

zoom in

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LOWEST PRICE OF THE FALL SEASON!
Lauren Ralph Lauren "Spa" Organic Bedding

Sleep easy while contributing to a healthier world with the Lauren Ralph Lauren Spa organic bedding collection. Environmentally advanced and subtly luxurious organic cotton with matelassé and flange detailing.

details

shipping & returns

- Collection includes duvet, comforter, two sham options, blanket, bedskirt, sheets and pillowcases.
- Not returnable to stores
- Please select a specific item for fabric details and country of origin.
- Recyclable packaging materials may include slight variations.
- [Shop our coordinating bath towels](#)
- Web ID: 288273

Overall Rating ★★★★★ 5 out of 5

1 of 1 (100%) customers would recommend this product to a friend.

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Sleep easy while contributing to a healthier world with the Lauren Ralph Lauren Spa organic bedding collection. Environmentally advanced and subtly luxurious organic cotton

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departments > petite focus > tops & tees



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Eileen Fisher Organic Cotton Tee (Petite)

Soft, earth-friendly organic cotton shapes a short-sleeve, scoop-neck tee, touched with a little added stretch.

- Approx. length: 21 1/2".
- Organic cotton/Lycra® spandex; machine wash.
- By Eileen Fisher; made in the USA.
- Petite Focus.

	item #	price:
Petite	182285	\$68.00

Fit: Petite Sizing: PP=2-4, PS=6-8, PM=10-12, PL=12-14.

Size:

[Eileen Fisher Women's Size Chart](#)

Select Size

Color:

Select Color

Pick up in store: [Choose a store](#) |

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MORE COLORS

Jag Jeans 'Lee Ha' Roll-Up Pants (Petite)
\$82.00

SHIP OR PICK UP



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Reference #24



The Chinese Supply Chain for Cotton

As the Chinese economy has become more market-oriented in recent years and since China joined the World Trade Organization in 2001, Chinese mill demand for cotton has grown rapidly. This growth is reflected throughout the supply chain, with increases in installed textile machinery, accelerated yarn, fabric, and apparel production, and growing consumer demand. Given all of these drivers for cotton growth, the Chinese supply chain may have the potential for still more expansion in cotton consumption.

Cotton Demand Understated?

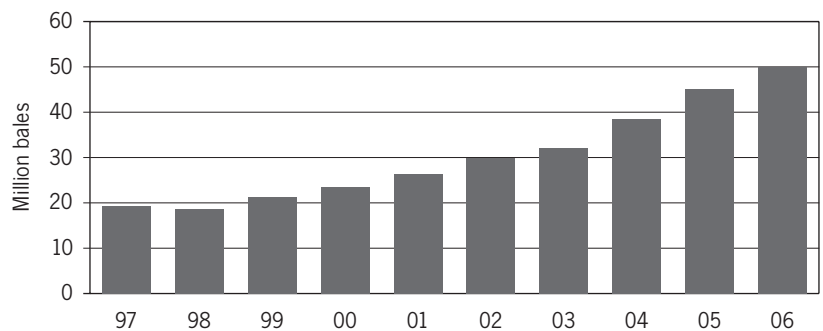
China remains the largest mill consumer of cotton in the world, using an estimated 50 million bales in 2006/07. Mill demand has mushroomed over the last decade, rising an average 9.6% per year, while cotton mill demand in the rest of the world expanded less than 1% per year. As a result, the decade saw China's share

of global cotton use jump from 22% to 41%. These phenomenal and unprecedented growth rates understandably have been questioned by many as overstated or unsustainable. However, analysis by Cotton Incorporated shows that the current level of mill demand is justified and that demand is likely to expand further in coming years, owing to upstream and downstream supply-chain pressures.

(continued on page 2)

Cotton Consumption in Chinese Textile Mills

1997 through 2006



Source: USDA.

Environmentally Friendly Apparel: The Consumer's Perspective

As "environmentally friendly" claims and products have increased in the marketplace, consumers have become more aware of eco-friendly apparel. However, the increase in awareness does not translate into increased importance or changed purchase intent among consumers. Both Cotton Incorporated's research and industry studies indicate that when deciding to buy apparel, consumers continue to consider other factors, such as price, more important than environmental impact.

Cotton Incorporated's Lifestyle Monitor™ in 2006 surveyed 4,000 U.S. consumers aged 16 to 70; the survey was conducted via telephone by Bellomy Research. In addition, 2,800 U.S. consumers aged 18 to 54 were surveyed on specific issues in March and December 2006; the survey was conducted via the Internet by Bellomy Research.

Awareness Increases as Action Declines

Consumers' awareness of environmentally friendly products has increased in the past few years, as more products are labeled with "green" terminology. In a December 2006 survey, one third of consumers said they were more aware of organic apparel and home textiles "today" than "a year ago." However, the choice to actively seek out environmentally friendly clothing remains restricted to a small niche group of consumers. When asked how much effort they put into finding environmentally friendly clothing, only 5% of consumers said they put a lot of effort into looking, statistically the same share as in a March 2006 survey. In addition, half as many consumers (15%, down 16 percentage points in nine months) said they would be bothered if they pur-

(continued on page 3)

Mill Capacity

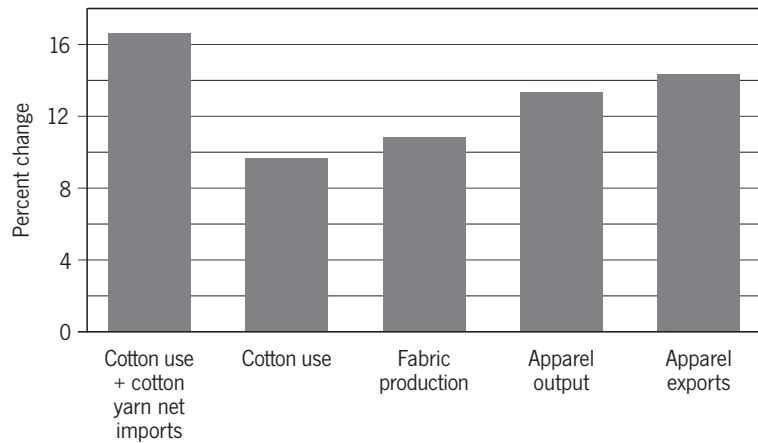
Mill demand for cotton depends on having the equipment in place to process the raw fiber. Measuring and tracking growth in investment in equipment and in the installed capacity of textile machinery — particularly spinning positions — can yield insight into how much fiber Chinese mills are capable of processing into yarns and whether that capacity is growing. At the start of the supply chain, China's fixed-asset investment in new textile and apparel equipment and plants surpassed 183 billion yuan (or \$22.9 billion) in 2006, reflecting 28% growth from 2005. These growth rates exceed the average annual expansion of mill demand for cotton, suggesting that textile investment will continue to support expanding mill demand.

The Pull of Downstream Demand

Further along the supply chain, various demand drivers can pull cotton through the pipeline. Production of yarn, cotton fabric, and apparel are indicators of demand for cotton. At the end of the supply chain, final demand for Chinese textiles and apparel is measured by domestic retail demand and exports. Since 1997, China's constant annual growth rate for apparel exports has been 14.3%, faster than the growth in any other segment of the supply chain, indicating latent demand to accelerate growth in the upstream segments. Although China has reported domestic retail apparel sales for only two years, volume climbed 21.8% from 2005 to 2006, faster than either exports or upstream supply-chain segments.

Apparel output, the next upstream component in the supply chain, similarly saw fast growth over the last decade. Production of garments climbed an annual average of 13.3%, driven by the robust export and retail demand. In 2006, China produced 17.8 billion apparel items — roughly three items for every person on the planet. For the first quarter of 2007, apparel output climbed 20.5% over the same period last year. This rate was faster than

Average Annual Growth Rates in China's Cotton Supply Chain, 1997 through 2006



Sources: USDA and China National Bureau of Statistics.

growth in the upstream segments and in exports, but slower than downstream growth in domestic retail sales, as the percentage of China's apparel output moving into the Chinese retail market, rather than to export, has started to grow.

Further upstream, growth in garment manufacturing is driving fabric production. Over the last decade, cotton fabric production climbed an average of 10.8% annually, faster than growth in upstream cotton mill demand, but slower than growth in downstream components. In turn, cotton mill use climbed an average of 9.6%. At first blush, the relatively slower growth in cotton demand over the last decade could suggest a loss in cotton's share of apparel exports and sales in China. However, when China's

cotton use and net trade in cotton yarn and thread are combined, the average annual growth over the last decade reaches 16.6%, higher than the downstream growth rate for apparel exports, implying that cotton has increased share in apparel output and exports over the decade.

Conclusion and Forecast

Over the last decade, mill demand for cotton clearly has been unable to keep up with faster growth in other segments of the Chinese supply chain. As a result, China's imports of cotton yarn and thread

In 2006, China produced 17.8 billion apparel items — roughly three items for every person on the planet.

have climbed nine of the last ten years, reaching 882,000 tons in 2006, making China the world's largest importer of cotton yarn and thread. Early forecasts suggest Chinese mill demand may reach 52.6 million bales in 2007/08. Although this is likely to be the world's fastest growth, it will still lag the growth in downstream segments of China's cotton supply chain, suggesting that China could import a record volume of cotton yarn again in 2007, contributing to robust cotton mill usage in yarn-exporting countries.

Cotton's share of Chinese apparel exports to several key markets has climbed in recent years. In particular, cotton's share of Chinese exports to the United States climbed 11 percentage points over the last decade and is poised to reach a new record in 2007, reflecting consumers' continuing affinity for cotton apparel. As the end of the Chinese cotton supply chain has grown faster than upstream segments over the past decade, the effect of continued growth in consumer preference for cotton apparel could continue to reverberate throughout the Chinese cotton supply chain.

Environment-Friendly Apparel *(continued)*

chased an item they believed to be environmentally friendly and later discovered that the claim was incorrect.

Ironically, as environmental claims have become more common and shoppers have become more aware, consumer concern about environmental issues in their purchase decisions has declined. The majority of consumers are concerned about some environmental issues, such as child labor (67%) and water quality (64%); however, from March to December 2006, consumer concern about issues such as food additives and fabric treated with dyes declined. Significantly more consumers said they were concerned about rising prices at retail than the environmental friendliness of their food or clothing.

Relative Importance Remains Low

Consistently, the majority of consumers are most concerned about price when shopping for clothing,

National research conducted by Frank About Women indicates that when women are deciding to buy apparel, the most important factors they consider are price, quality, and style. Most women say they don't want to change their lives, sacrifice quality, or pay more for green products.

—franklyspeaking, vol. 13

while only a small share consider environmental issues to be important. According to Cotton Incorporated's Lifestyle Monitor™, environmental friendliness has remained the least important factor in consumers' apparel purchase decisions for over a decade. When purchasing apparel, 87% of consumers consider price to be the most important factor, followed by fabric content (51%), and laundering instructions (50%). Fewer than a third (30%) consider environmental friendliness to be important, down significantly from 1995 (by 6 percentage points). Separate research by the NPD Group confirms the importance of factors such as price among apparel shoppers, finding that price is a key purchase motivator (43%), following style (62%) and comfort (44%).

Environmental Issues of Concern to Consumers

Surveyed in March 2006 and December 2006

Issue	% Responding		
	3/06	12/06	Point Change
Child labor practices	66.0	66.7	+0.7
Rising prices at retail	*	64.9	*
Water quality	66.1	64.1	-2.0
Loss of rural farm land	49.9	49.6	-0.3
Pesticides to grow food crops	48.8	48.1	-0.7
Rising sea levels due to global warming	44.9	44.2	-0.7
Preservatives and additives in food	47.4	43.2	-4.2
Genetically modified plants for use in food	42.4	39.9	-2.5
Clothing or fabric treated with dyes, chemicals & bleaches	25.4	19.4	-6.0

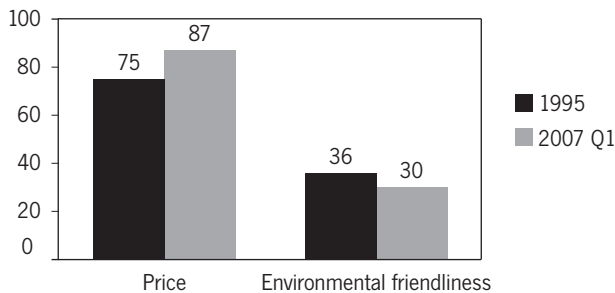
Source: Cotton Incorporated's 2006 Attitudinal Research. *Not asked in March 2006.



Consumer Confusion

Perhaps the decline in importance of environmental friendliness to consumers is due to their confusion over the profusion of “eco-friendly” claims being made at retail. For example, only one third of consumers correctly understand the terms “renewable” and “sustainable.” However, consumers do relate to “natural” products, including natural fibers. According to the Lifestyle Monitor, whether or not consumers consider environmental friendliness as a purchase driver, cotton is their preferred fiber. Additional research shows that consumers consider

Percent of Consumers Who Consider Price or Environmental Friendliness Important When Purchasing Apparel



Source: Cotton Incorporated's Lifestyle Monitor™.

“All other components of the value equation being equal, price is often the deciding factor, particularly in consumer electronics, household appliances, sporting goods, outdoor grills, and of course trendy apparel.”

—Marshal Cohen, *Why Consumers Do What They Do* (2006)

cotton to be the safest fiber for the environment, with 66% calling it “extremely safe.” Consumers even say they are willing to pay more for natural fibers such as cotton, and this willingness to pay more is significantly higher among consumers who consider the environment when shopping for clothing (72%) than among shoppers overall (62%).

Conclusion

Although consumers are more aware of environmentally friendly apparel, those who consider it important to look for and buy such products remain a niche market. Factors such as price continue to be the driving force in most consumers' apparel purchases. However, whether or not they care about environmental friendliness, consumers continue to prefer natural fibers such as cotton.

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Textile Consumer™ is published by Cotton Incorporated as a service to the textile and retailing industries.



Reference #25

9 of 1000 DOCUMENTS

PROGRESSIVE GROCER
THE PUBLICATION OF STRATEGIC MANAGEMENT
progressivegrocer.com

May 25, 2007

'Sustainability' Lacks Meaning for Many Consumers: Hartman Report

SECTION: NEWS; EBUSINESS

LENGTH: 398 words

HIGHLIGHT: BELLEVUE, Wash. -- The term "**sustainability**," while widely used by the media and industry, holds little to no meaning for consumers, according to the newest report released by The Hartman Group, a consulting and market research firm here.

BELLEVUE, Wash. -- The term "**sustainability**," while widely used by the media and industry, holds little to no meaning for consumers, according to the newest report released by The Hartman Group, a consulting and market research firm here.

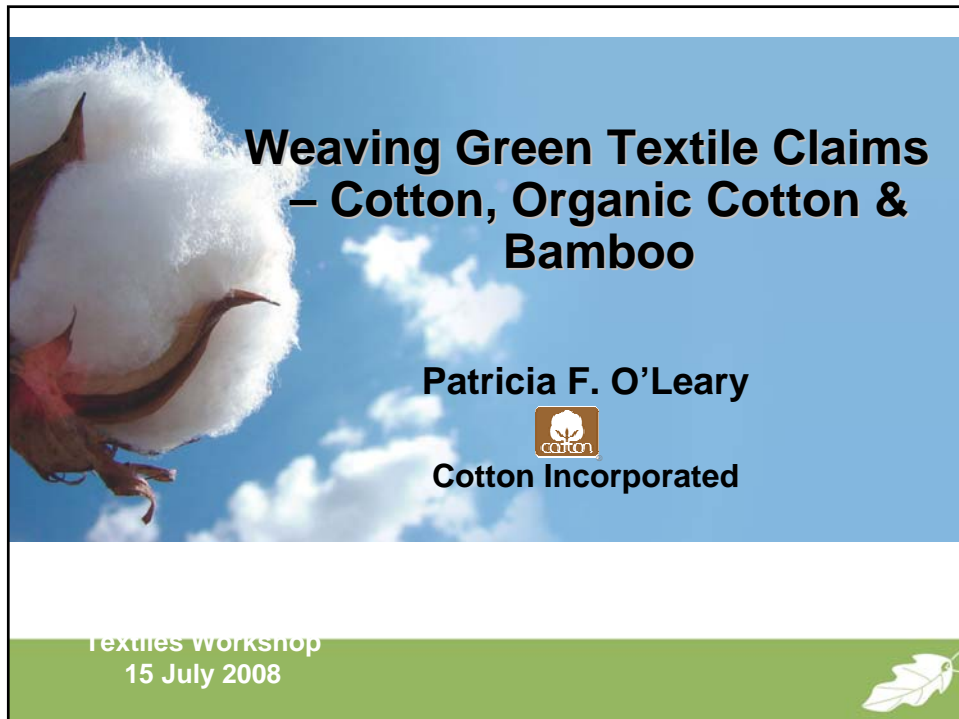
Instead, consumers ascribe very different personal meanings to the term. The Hartman Report on "**Sustainability: Understanding the Consumer Perspective**" finds that just over half (54 percent) of consumers claim any familiarity at all with the term "**sustainability**," and most of these consumers cannot define it appropriately upon probing. Only 5 percent indicate they know which companies support **sustainability** values. Only 12 percent indicate they know where to buy products from such companies.

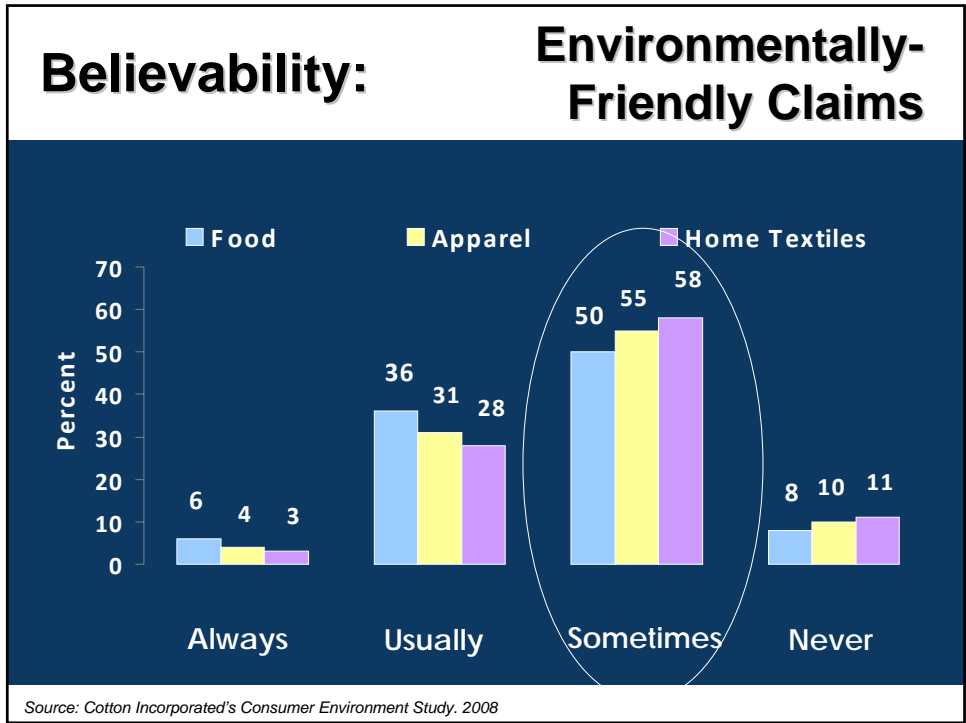
"**Sustainability** is not seen by consumers as simply 'saving the earth,'" noted Laurie Demeritt, president and c.o.o. for The Hartman Group. "It is a multi-dimensional topic that encompasses the environment, the family, the community, and even the economy of today's world. Many of the consumer values driving the interest in health and wellness stem from a foundation of **sustainability**. **Sustainability**, in a sense, is about preserving a certain condition or way of life; the ability to control one's surroundings."

According to the report, while most consumers have a limited understanding of the broad concept of **sustainability**, consumer engagement can be described in varying degrees of "**sustainability** consciousness." This refers to the way people link everyday life to "big" problems (e.g., food, water and air quality). The report finds that 72 percent of U.S. consumers believe their purchases have significant impact on society. Additionally, a full 71 percent say they are "somewhat likely" or "very likely" to pay a 10 percent premium for sustainable products.

"The dynamics of **sustainability** in American consumer culture will continue to change and evolve, just as dynamics behind so-called 'green' and 'environmental' markets have evolved," said Harvey Hartman, founder, chairman, and c.e.o. "For those involved with speaking to consumers from a platform of **sustainability**, we feel that it is important to reiterate that we are currently experiencing a significant cultural shift in which consumers will continue to adapt their behavior to align with companies, products, and services which they find to be relevant to their current lifestyle."

Reference #27





Confusion: Perceptions of Organic Cotton Textiles

Questions*	% Yes or Not Sure	
	2003	2006
Made from recycled materials	67	67
Must be U.S. cotton	64	64
Requires no ironing	63	57
May contain soy	68	78
Same as 100% cotton	80	75

* Questions developed jointly w/ the Organic Trade Association

Source: Cotton Incorporated's Lifestyle Monitor™ Consumer Environment Research 2003, 2006