

# TEXTILES and APPAREL NEWSLETTER

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## Announcing

### Cornell Design League Show

The 22<sup>nd</sup> annual Cornell Design League Show, *Model Citizen*, had it all. Lingerie, evening gowns, casual wear, and a few garments that defied description. Long, short, and in-between. Layered, wrapped, stitched, and glued. Satin, spandex, sequins, plastic, and ribbons accessorized with forks, gas masks, and parasols. The 2006 theme paid “homage to our growing awareness of issues, fashion and non-fashion related, which continue to confront all citizens around the globe.” The student-run fashion show has become a campus rite of spring as Cornell students demonstrate skill, imagination, and gung-ho excitement through clothing design. More than 40 designers, representing a variety of majors, made time outside their academic work to produce garments for the campus catwalk. At least 150 students were featured as models and others helped with marketing, photography, and set production.

## ENGAGING YOUTH

### 2006 Spring/Summer TXA Youth Activities

CHARLOTTE COFFMAN

#### Go Figure! (May 1 onward)

Your Water Ways, an activity about water use and conservation has been posted to the interactive website, *Go Figure!*. Although the website is still under construction, three fun activities are available and worth trying. Two additional activities will be added over the summer months. Check out Go Figure! at <http://gofigure.cce.cornell.edu/> and let us know what you think.

#### Plants & Textiles — A Legacy of Technology (May 10-12)

If you are headed to the ACCEE Conference in Syracuse, check out the Plants & Textiles poster and try your hand at weaving a mat. Remember that both large and small wooden looms are still available for sale and traveling trunks (teaching kits) are available for loan. Contact Charlotte Coffman at [cwc4@cornell.edu](mailto:cwc4@cornell.edu) or 607-255-2009. Also, check the website <https://www.hort.cornell.edu/plantsandtextiles> for great summer learning experiences.

#### Fabric/Flight Connection (July 11, 2006)

Cornell educators who work in science, math, engineering and technology will offer a variety of activities as part of the Oswego BOCES summer program the second week of July. Youth participants will make parachutes, throw Frisbees, and try other activities from the Fabric/Flight Connection on the afternoon of July 11.

#### New York State Fair (August 25 – September 5)

TXA will once again sponsor counties whose youth are willing to lead hands-on activities in In-Touch Science, Fabric/Flight Connection, Simple Gifts, and the mat weaving activity from Plants & Textiles — A Legacy of Technology. The intention is to sponsor three counties (one county/time period) for each project. To sign up, contact JoAnne Baldini ([jb61@cornell.edu](mailto:jb61@cornell.edu)) in the 4-H Office.

## CONCERNING CONSUMERS

### On the Dark Side

CHARLOTTE COFFMAN

You have probably noticed that dark clothing appears to fade faster with multiple washings than does light-colored clothing. That black t-shirt quickly takes on a grey tinge and those black jeans look a lot like dark blue. What's going on? One question, but at least three possible answers.

One answer lies with the designer. Designer Donna Karan likes to experiment with the different intensities of black. Known as the “queen of black,” her label looks for a new black each season — blue-black, brown-black, metallic black, steel black, etc. Some designers believe that consumers expect cotton garments to fade and soften with time so the loss of color is programmed in from the beginning.

A second answer focuses on the manufacturer. Manufacturers have to balance the cost, time, and quality of production. Most colors can be rendered colorfast at a reasonable cost, but not black. To maintain a reasonable cost for a cotton t-shirt, direct dyeing will be used but blacks produced by this process will fade with time. With protein fibers silk and wool, acid dyes can be used to obtain a more stable black because consumers do object to the extra cost. Toray Industries in Japan offers EX-Black Finish fabrics with superior colorfastness. EX-Black uses a twisted polyester yarn, a special resin, and other proprietary techniques.

The third answer is in the hands of the consumer. Black, as well as other colors, may fade if the consumer does not follow the care label. Using the wrong water temperature, wash cycle, and laundry aids can speed fading. Ninety-eight percent of American municipalities have chlorine in their water so unless you use well water, you may be gently bleaching your clothes. Detergents with optical brighteners give dark colors a dull color. Dry cleaning is also not foolproof as solvents can adversely affect the color.

Responding to consumer complaints about color loss in black garments, Cheer developed Cheer Dark, a detergent intended to keep black clothes black. Cheer claimed this new detergent has “chlorine scavenger agent” to neutralize chlorine in the water and a “dye transfer inhibitor” to trap any loose dye molecules so they could not attach to other garments. Consumer Reports put those claims to the test as they washed 100 percent black cotton knit and poplin swatches five times in three detergents: Cheer Dark Formula, Cheer ColorGuard, and Seventh Generation Free & Clear. The investigators used the same washing conditions (washer, water, temperature, etc.) and compared the washed swatches to the original fabric under artificial daylight. They found that all three detergents performed equally well, but Cheer Dark offered no extra advantage. It had the disadvantage of costing an additional 32 cents per wash load.

#### Resources:

1. \_\_\_\_\_ New Cheer Aims to Keep Dark Clothes Dark, *Consumer Reports*, pp 9. January, 2006.
2. Weisman, K. The Art of Keeping Black, Black, *The International Herald*, October 9, 2005.  
[Tribunehttp://www.ihf.com/articles/2005/10/09/opinion/rblack.php](http://www.ihf.com/articles/2005/10/09/opinion/rblack.php)

## Best Buy Sheets — You Do the Math

CHARLOTTE COFFMAN

How can consumers identify high quality bed sheets? Conventional wisdom says that the higher the thread count, the better the quality. High quality, of course, means high price, but many consumers slap down the dollars following a second bit of conventional wisdom, “you get what you pay for.” Now, Good Housekeeping and Consumer Reports are challenging both assumptions.

Thread count is the number of vertical (warp) yarns and the number of horizontal (filling or weft) yarns in one square inch of fabric. It can be written as (warp X filling) or (warp + filling). The former designation is most useful because it provides information about the fabric weave. Thus, a fabric of balanced weave with 90 warp yarns per inch and 90 filling yards per inch can be written as (90 X 90) or as (180). An unbalanced weave with 60 warp yarns and 120 filling yarns would be expressed as (120 X 60) or also (180). Common thread counts for sheets and pillowcases are 130, 160, 180, 200, and 310.

High thread counts usually mean that fine yarns have been used and that the yarns are tightly woven resulting in fabric that is sturdy, soft, resistant to shrinkage, and resistant to air permeability. Low thread counts might be preferred by some for their resilience, light weight, and low cost.

But what about those 1,500 thread counts that you have seen advertised? “Misleading,” says Good Housekeeping. Manufacturers are indeed counting yarns but they are counting every strand of a yarn instead of the whole yarn. Thus, if every yarn is made of three strands twisted together, the manufacturer can triple the thread count through “creative counting.” Good Housekeeping magazine has been tracking this practice for years and, in 2002, reported that 7 out of 8 sheets tested in their institute failed the thread count tests. Grand Patrician, Wamsutta, Charisma, and Waverly by Divatex were among the few that delivered the correct count.

After unfavorable publicity from Good Housekeeping, Consumer Reports, and the TV program Good Morning America, the textile industry rewrote its voluntary standard, making it clear that thread count for sheeting should be based on yarns, not individual strands or plies within a yarn. The Federal Trade Commission wrote a letter supporting that definition, saying, “Consumers could be deceived or misled by the practice of stating an inflated thread count.”

Nonetheless, the standard is voluntary so consumers should be aware that careful scrutiny and common sense are still critical shopping skills. Consumer Reports notes that cotton and cotton-blend sheets with a thread count of 180 to 200 are comfortable and long lasting. If you prefer a crisp sheet, choose a percale fabric, which is typically made from fine, combed yarns. A satin or sateen weave provides a soft, silky, lustrous sheet, but with less durability. Knitted sheeting offers

stretchability for a smooth fit, but a broken yarn can be unsightly. Thread count is not relevant in knitted sheets because of the structural difference between woven and knitted fabric. Finally, beware of sheets with super high thread counts and super low prices, a situation that brings to mind another bit of conventional wisdom, “It is too good to be true.”

### Resources:

1. ABC News, Good Morning America. The Truth Behind Thread Counts, March 22, 2006.  
<<http://abcnews.go.com/GMA/Moms/story?id=1751253&page=2>>
2. Ask Yahoo!, <<http://ask.yahoo.com/20020528.html>>
3. Good Housekeeping Institute. Can You Believe the Thread Count?, <[http://magazines.ivillage.com/goodhousekeeping/consumer/beauty/articles/0,,284522\\_539658,00.htm](http://magazines.ivillage.com/goodhousekeeping/consumer/beauty/articles/0,,284522_539658,00.htm)>
4. Hatch, Kathryn. Textile Science, West Publishing, St. Paul, MN, pp 319. 1993.

## Under Armour’s Quest for Success

BETH HERGET

Under Armour’s founder and president Kevin Plank knew he had started something big when *Time Magazine* wrote a full-length article on his company’s success in January, 2003. As *Time* mentioned, and Underarmour.com notes as well, the now multi-million dollar company started with Plank’s desire for a “comfortable t-shirt.” Though oversimplified, this basic strategy is a key factor in how Under Armour has become the fastest growing company in performance athletic apparel over the past few years.

As a player on the University of Maryland’s football team, Kevin Plank began his quest for a t-shirt that would wick away his sweat unlike his soggy cotton undergarments. When he still had not found what he was looking for upon graduation, he researched materials and had a batch of a few hundred manufactured. In 1996 Plank distributed those first 500 shirts himself, mostly to other collegiate football teams like Georgia Tech. The heartening news of other people’s interest in his technology propelled Plank to continue manufacturing and selling, gradually expanding into larger consumer markets. Today, everyone from NFL players to school-age children wear the Under Armour logo for sport and for a fashion statement.

The technology of Under Armour is meant to “provide compression and wick perspiration away [thereby] regulating temperature” This process is continually evolving as textile technology becomes increasingly more efficient at achieving Under Armour’s aims. The research conducted on the apparel has direct input from athletes themselves who provide feedback to better the product. No doubt other companies are also in the race for the latest and most cutting-edge fabrics. For example, Nike has launched a line of sweat-wicking clothing called Dri-FIT One, while Reebok is selling a similar line, called NFL Equipment, as part of a 10-year, \$250 million licensing deal with the National Football League.

Under Armour realizes this threat and became a publicly traded company in November 2005. Even before its first day of trading on the Nasdaq, the company's price (originally \$13) doubled. The stock shot up 94.7 percent to \$25.30 a share after its first day of public trading.

Under Armour also is expanding its consumer base beyond the athletic young male demographic. While it is sold in most sporting goods chains, high-end department stores such as Nordstrom's stock Under Armour in their Women's departments. Last February the company spent millions of dollars for an advertising campaign that stressed Under Armour's designs for women. With this new push, Under Armour continues to tout its slogan "the advantage is undeniable."

Resources:

1. Underarmour <http://www.underarmour.com>
2. Time, January 13, 2003 <<http://www.time.com>>
3. Women's Wear Daily, November 21, 2005. <<http://www.wwd.com>>
4. Women's Wear Daily, February 24, 2005. <<http://www.com>>



## INTRIGUING YARNS

Sakichi Toyoda created Japan's first power loom, which became the cornerstone of the Japanese textile machinery industry. To sell the looms, Toyoda built a company called Toyoda Shoten. In 1935, his son, Kiichiro, expanded the family business to include automobiles. When they began to export cars, they changed the spelling of the name to Toyota. Today, Toyota is Japan's biggest manufacturer.

—Cool Quiz! <http://www.coolquiz.com/>

## BROWSING WEBSITES

### Ask Yahoo!

<http://ask.yahoo.com/>

Although this website covers many topics, some of them funny and trivial, you can also find answers to practical consumer questions related to textiles and apparel.

Check the "Fashion and Beauty" category under *Arts & Humanities* for these questions:

- Who invented the bra?
- What is pashmina?
- What makes fabric wrinkle free?
- Where can I have custom-design neckties made?

Try the "Cleaning" category under *Living* for questions like these:

- How do you remove candle wax from carpet?
- How does dry cleaning work?
- Where can I find information on stain removal?
- What is the best way to clean window blinds?

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