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Cotton that's kinder to the planet

The biggest-selling fabric is typically made from water-thirsty, genetically engineered and pesticide-treated crops. Some clothing companies are seeking to use cotton with a smaller eco-footprint.



With 62 billion pounds of cotton cultivated annually, a move is afoot to lessen its effects on the Earth. (Joshua Cogan / For The Times / June 19, 2011)

Leather, tulle and silk may be the stuff of runway dreams, but when it comes to most U.S. apparel, cotton is king. Almost 75% of clothing sold in the U.S. contains at least some of the tufty fiber, according to the 2010 Cotton Inc. Retail Monitor, a survey of mass retailers.

Farmers in this country will grow 8.16 billion pounds of cotton during the current growing season. Add China, India and the 100-plus other countries that cultivate cotton, and the yield is 62 billion pounds produced annually worldwide.

That's a lot of blue jeans, T-shirts and underwear.

It's a \$40-billion industry that touches the lives of nearly every human on the planet. Many of us — subconsciously at least — prize the fabric for its soft feel and easy maintenance. But most cotton is grown with genetically modified seeds that are cultivated with pesticides. It has come

under fire in recent years for the amount of chemicals and water used in the growing process.

Cotton textiles account for 16% of the world's pesticide use, according to the U.K.-based Pesticide Action Network, a coalition of 600 nongovernmental organizations in 90 countries that is working to replace the use of hazardous pesticides with more ecologically sound alternatives. (That figure is contested by the biotechnology market research firm, Cropnosis, which puts the figure at 6.95%. U.K.-based Cropnosis is an independent company that analyzes the world's biggest agrochemical players, including Dow, Monsanto and Bayer.)

What's a company interested in sustainability to do? Organic cotton is one answer. Its use in garments, grown without genetically engineered seeds or the use of synthetic fertilizers and pesticides, increased 35% from 2008 to 2009, according to the Textile Exchange, an international nonprofit that promotes sustainable textiles and counts Wal-Mart and Patagonia among its members.

The U.S. and Turkey are the biggest producers of organic cotton worldwide, which costs roughly twice as much to produce as conventionally grown cotton. Though widely used by huge apparel firms, including Nike, H&M and Wal-Mart, organic cotton accounts for just 1.1% of the global cotton supply.

But even though organic cottons are grown without pesticides, an organic label on cotton clothing doesn't guarantee it's entirely environmentally friendly because many cotton textiles are finished with formaldehyde (recently declared a carcinogen by the U.S. government), bleach and other chemicals. The Global Organic Textile Standard, an international certification developed in 2006, guarantees that cotton is not only grown without synthetic pesticides and fertilizers but also processed without certain chemicals or in sweatshops. But only 20 U.S. companies are certified by GOTS.

And an organic label doesn't cover the use of water and labor, so a handful of companies, including Levi Strauss, are looking at other ways to process cotton. Levi Strauss started using organic cotton in its denim in the early '90s but is now shifting away from it in favor of something called "better cotton" to address not only pesticide and fertilizer use but water, soil health and labor standards.

Strauss conducted a life cycle assessment of its 501 jeans and Dockers khakis in 2008 to look into the environmental impact of its most iconic products. It found one of its best opportunities for reducing its environmental impact was during cotton production. (The Water Footprint Network, a Dutch conservation group, estimates that it takes nearly 3,000 gallons of water, most of which goes toward growing the cotton, to produce a single pair of blue jeans.)

To that end, Levi, along with H&M, Adidas and the cotton-grower-funded group Cotton Inc., have all embraced the Better Cotton Initiative, which was started in Switzerland in 2009.

The initiative grew out of a movement spearheaded by the World Wildlife Fund, a privately funded international conservation organization that, in the early 2000s, began looking into the environmental impacts of the world's most popular commodities, including cotton. A pilot program in Pakistan led to a 32% reduction in the use of water and pesticides. Pakistan, Brazil and India are among the countries that participated in the first official crops of better cotton grown during the 2010-11 season.

Adidas has committed to making 100% of its apparel from better cotton by 2018. H&M has said it will use only better, recycled and organic cottons by 2020.

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