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Levi's Goes Green With Waste<Less Jeans

By Susan Berfield on October 18, 2012



Photo illustration by 731: Eight recycled plastic bottles go into each pair of WasteLess jeans. Levi's expects to sell 29 million WaterLess denim products this year

Most apparel companies work hard to give their clothes the sheen of sophistication or whimsy. Levi Strauss is trying hard not to. When its latest line of jeans arrives in stores early next year, the pitch will be: "These jeans are made of garbage." Crushed brown and green plastic bottles will be on display nearby. Eight of those are blended into each pair of Levi's new Waste<Less jeans, which are composed of at least 20 percent recycled plastic.

The Waste<Less denim collection, unveiled on Oct. 16, is part of a bigger push to reduce Levi's environmental impact throughout the entire process of making jeans. "We want to build sustainability into everything we do," says Michael Kobori, the vice president of supply chain social and environmental sustainability. Resource scarcity and increasingly volatile prices for cotton make this a necessity more than a choice. Plus outside groups are putting pressure on big consumer companies such as Levi's to be stewards of the environment. "We expect brands we trust to take care of us, to keep us honest," says Eric Olson, the senior vice president of BSR, an environmental group that works with businesses. "We don't want to hear that we're ruining someone's life or destroying the planet. We don't want to pay more, but we want companies to take care of it."

Other apparel makers are trying to be green too, of course. Nike (NKE) and Gap (GPS) have their own sustainability programs, and Patagonia has long supported a small ecosystem of earth-friendly suppliers. But as the biggest maker of jeans in the world, with sales of \$4.8 billion in 2011, Levi's efforts command attention.

In 2007, Levi's was among the first in the apparel industry to conduct a life-cycle assessment of some of its major products. It measured the environmental impact of its 501 jeans and Dockers from cotton fields to consumers' closets. The results were surprising. Levi's found that 49 percent of the water use during the lifetime of a pair of 501 jeans occurred at the very beginning, with cotton farmers. Another 45 percent of the water was used by consumers to wash their jeans, typically about 100 times. Levi's customers were also responsible for nearly 60 percent of the energy used to make and care for a pair of jeans. It turned out that the manufacturing process, where Levi's can exert the most control, had the least impact on water and energy use.

So Levi's joined the Better Cotton Initiative, a group of companies that work with local nongovernmental organizations in Pakistan, India, Brazil, and Mali to teach farmers how to grow cotton with less water. The first of the cotton was harvested last year, and Levi's blended its share into more than 5 million pairs of jeans. Each has about 5 percent of the low-water cotton, though the members of the initiative agreed not to label products using that special cotton as such. By not touting the cotton's provenance on labels, they hope to avoid creating too great a demand for the current limited supply. Levi's goal is to use a 20 percent blend of the new cotton in its products by 2015. (Organic cotton, grown without pesticides, has proved too expensive, and Levi's discontinued its line of organic jeans in 2008.)

In 2010, Levi's also began a marketing campaign to encourage people to wash their jeans less often, in cold water only, and line-dry them. It changed the care tag to say so and even held an online contest for consumers to suggest their own air-drying ideas. It also recommended that consumers donate old jeans to Goodwill rather than throw them away.

Levi's started working on ways to use less water in the manufacturing of its jeans, too. "You can't add sustainability midway through the process, you have to start with the blank page," says Jonathan Kirby, head of merchandise and design. "Up until then it was: 'What can we add to make it look different?'" says Kobori. "They flipped that thinking. 'What can we take out and still get the same look?'"

The standard process of distressing jeans involved washing them with lots of pumice stones repeatedly, using roughly 45 liters of water per pair. Kirby's team experimented with using no water at all. "We learned that if you put a lot of stones into a dry machine for one hour you'll end up with rags," he says. So they brought back the water—just less of it. Eventually, by using ceramic stones and rubber balls and changing the filtration system in the washing machines, engineers came up with jeans that, on average, use only four liters of water to achieve the distressed look.

The so-called Water<Less jeans were introduced in 2011, when 1.5 million were made. This year, Levi's will send 29 million Water<Less jeans and other items to its stores. Prices range from \$58 to \$178 for denim made in the U.S. Kirby says the Water<Less jeans have saved 360 million liters of water so far.

After the Water<Less project got underway, Kirby began thinking about plastic. "We thought post-consumer waste would have the most relevancy with the average person," he says. "It's tangible. It's understandable." It turned out that a few people at Cone Denim, the company that's produced fabric for Levi's 501s for nearly a century, were studying plastic as well. Allen Little, Cone's director of product development, had been testing fibers from recycled colored plastic bottles: the brown beer bottles sold in stadiums, the green bottles that contain clear soda, and the blue five-gallon jugs of water.

When plastic bottles are recycled, they're sorted by color, cleaned, and sold as polyester flakes. Those flakes can be stretched, or extruded, into fiber, which can be spun into yarn and woven into cotton fabric on high-speed machines. Recycled fibers, though, aren't as strong or consistent as virgin fibers.

“In the recycled market, the problem is not the supply but the quality of the supply,” says Kara Nicholas, Cone’s vice president of design and marketing. “We had the intention of doing good for the planet, but we also have to run the mills.” It took Little about three months to devise proprietary processes to strengthen the fiber and customize the spinning setup.

Little found that the colors, which Cone calls beer-bottle brown and soda-pop green, created a different sheen on the denim. Initially, it’s most obvious on the inside of the jeans, though with wear, more of the bottle color shows through. “The colors made an interesting visual story,” says Little. “The consumer can get an idea of what’s been recycled.” Cone developed an exclusive finish for Levi’s and is selling different blends of plastic and denim to other companies. “We have customers who like the aesthetics even if they don’t want to communicate what’s in it,” Nicholas says.

The first Waste<Less collection will include men’s and women’s jeans as well as jean jackets—about 400,000 items in all. The price for a pair of jeans will range from \$69 to \$128. The denim is being made in Cone’s White Oak facility in North Carolina. If Levi’s places other, larger orders, Nicholas says Cone’s two facilities in Mexico are capable of producing the material as well.

The first batch of Waste<Less jeans used about 3.5 million bottles all together. Although that’s a big green accomplishment for Levi’s, it pales beside the estimated 33 billion bottles of soda that Americans consumed last year. Only 29 percent of all plastic bottles are recycled. Likewise, the amount of H₂O that has been saved by Levi’s Water<Less jeans so far is just equivalent to the volume of 144 Olympic-size swimming pools.

“Is turning eight bottles of plastic into a pair of jeans worth it? I think so,” says James Curleigh, president of the Levi’s brand. “Some things are more for making a point than a purpose. We want critical mass.” By that he means products that are eco-friendly, economically smart, and stylish.

Curleigh, who wears beer-bottle brown Waste<Less jeans cuffed to show off the color, argues that any reduction in Levi’s cotton use, however small, is worth it: “Cotton is the single most volatile commodity in the apparel industry. Never mind sustainability for a minute. If I could come up with a way to put 20 percent of something else that is cost-neutral and has a reliable source, I would probably take it anyway.”

The bottom line: Levi’s, eager to reduce its reliance on water-intensive cotton, has already used 3.5 million plastic bottles in its new Waste<Less jeans.