

## U.S. Cotton and the Environment: A Proven Track Record



*Questions & Answers about cotton and the environment from the Cotton Research & Promotion Program  
Administered by the Cotton Board and conducted by Cotton Incorporated*

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The following questions and answers are being used to help “set-the-record-straight” about cotton’s environmental footprint and the true sustainability of modern cotton production.

### **Q. Why is cotton so important in today’s energy-conscious environment?**

Cotton is the largest natural fiber supplying the global demand for textile products. In 2005, the world’s demand for textile fibers was 130 billion pounds. In 2006 and beyond, world income and population growth will stimulate a 4.5 billion pound **increase** in global fiber demand **each year**. That means enough fiber will be needed for nearly 9 billion tee shirts or 2.3 billion pairs of denim jeans. And the main alternatives to cotton are non-renewable chemical fibers.

### **Q. Can cotton supply the market in an environmentally-friendly manner?**

Absolutely. Cotton is sustainable, renewable, and biodegradable, making it an excellent choice as an environmentally-friendly fiber throughout its entire product life cycle. Most chemical fibers are petroleum based, which means they come from nonrenewable resources.

### **Q. I’ve heard that it takes a tremendous amount of pesticides to grow cotton. Is that true?**

No. According to the U.S. Department of Agriculture, only about **1.2 pounds** of insecticides and **2.1 pounds** of herbicides are applied to each acre of cotton. The average acre in the U.S. produces about 800 pounds of cotton. **That works out to around 0.09 ounces of total pesticides applied per pound of cotton produced.** More importantly, with the advent of new technology, the number of pesticide applications has dropped dramatically in the United States. Farmers who live and work on their land have every personal and economic incentive to use FEWER chemicals in production, not more! Globally, only 8.5% of all pesticides applied to crops are used to grow cotton.

### **Q. Even so, aren’t there toxins left on cotton products that could be harmful to one’s health?**

No. In the United States, cotton is regulated as a food crop by the Food and Drug Administration (FDA). Cotton is grown just like other major food crops, meaning that there are tight restrictions. Worldwide studies consistently show no pesticide residue on the raw fiber or the textile products made from the fiber.

### **Q. What about water? I have heard claims that growing cotton takes a lot of water.**

Cotton is very drought and heat-tolerant. Cotton does NOT require excessive amounts of water. In fact, cotton uses less water than many other major crops produced in this country. Only 35% of U.S. cotton acreage requires some form of irrigation—the rest of the cotton land is supplied by natural rainfall. Furthermore, producers have become more efficient in their water usage. Compared to 25 years ago, U.S. farmers are now using 45% less water to grow a pound of cotton.

### **Q. What about organic cotton as an alternative?**

Organic cotton is another sustainable alternative to chemically-based or synthetic fibers. There are strict standards in the United States for organic cotton, and it is not easy to become a certified organic cotton operation. “Organic” means the cotton is produced to a set of strict USDA standards, enforced by USDA-certifying agents who must annually inspect fields and the operation for adherence to National Organic Program (NOP) standards. NOP standards require a 3-year conversion for land before organic crops can be harvested, so becoming an organic cotton producer is a long-term decision.

Interest in organic cotton has increased among retailers and brands but there is no sustained, measurable increase in the organic cotton supply, which is estimated at only 0.1% of global cotton production. In fact, the entire world supply of organic cotton would fit on one medium-sized cargo ship. And that’s understandable when you look at what it takes to become organic – tough standards and more management because of the standards that prohibit various synthetic inputs and practices. Generally, organic production means higher costs, which typically translate into premiums of 50% to 100% in raw fiber prices. From a production perspective alone, it would take an additional 6 million acres – 40 percent of the current harvested cotton acreage in the U.S.—to meet the current market demand for U.S. cotton.

### **Q. What about foreign sources for organic cotton?**

If cotton is marketed in the United States as organic, regardless of the country of origin, it still must meet the same strict U.S. standards as if it was produced here in the United States. That’s why going overseas to find “easy” supplies of “other organic cotton” is a myth. Organic cotton cannot be legally sold, represented, or marketed in the United States unless it meets the rigorous U.S. organic standards that were implemented in October, 2002. And only a USDA-certifying agent can verify that the cotton – wherever it was produced – meets the U.S. standards.

### **Q. What else is cotton doing long term to reduce its environmental footprint?**

New technology, such as insect-resistant and drought-resistant varieties, continues to reduce the need for pesticides and water. These same varieties will improve yields, allowing for more cotton to be grown on the same amount of land. Conservation tillage practices (less plowing and disturbing of the soil) have increased dramatically in the U.S., leading to less erosion and runoff. These practices, as adopted in the U.S. from 1996-2004, have reduced CO2 emissions by an amount equivalent to removing over 27,000 cars from the road—permanently!

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