

# ORGANIC COTTON: PRODUCTION AND MARKETING TRENDS IN THE U.S. AND GLOBALLY- 2001

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## Abstract

Organic cotton is grown in seven states and eleven countries. Based on OTA's recent survey of the organic industry, expanded use by key industry players, and recent interest expressed by both small and large companies internationally, organic cotton appears to be poised on the edge of substantial growth in the years to come.

## Background

### What is OTA?

The Organic Trade Association is the membership-based association representing organic businesses in North America. OTA's Fiber Council (OFC), which I coordinate, was established in 1997 to focus on issues particular to the organic fiber sector, including organically grown cotton, wool, flax and hemp.

### What is Organic Cotton?

The term "organic" refers to the way agricultural products - whether food or fiber - are grown and processed. The word "organic" on the label stands for a commitment to a system of agriculture that strives for a balance with nature, using methods and materials that are of low impact to the environment. "Certified organic" means an independent organization verifies that the company meets or exceeds defined organic standards.

The federal rule defining "organic" was published December 21, 2000 by the U.S. Department of Agriculture. The rule prohibits the use of genetic engineering, irradiation or sewage sludge as well as toxic and persistent synthetic pesticides and synthetic fertilizers in organic agriculture and processing. The rule, in development over a decade, will be fully implemented in October 2002. (USDA)

Federal regulations are important because they standardize strict criteria that will facilitate domestic and international trade. In-depth information and the new rule are available online at [www.ams.usda.gov/nop](http://www.ams.usda.gov/nop). For an overview and useful business contacts, visit OTA's web site: [www.ota.com](http://www.ota.com).

## Trends in Organic Cotton Production

### Acres and Yield of Organic Cotton Planted in the United States: 2000-2001

In 2000, Cotton Incorporated gave OTA a grant to determine the number of acres in organic cotton production domestically and internationally.

OTA data show that in terms of *acres*, the number of acres of organic cotton *planted* in seven U.S. states decreased 18 percent from 13,926 acres in 2000 to 11,459 acres in 2001 (Table 1). This includes both cotton that has gone through the certification program and that which is still transitioning to its final certification. Texas continued to lead the United States in organic cotton production, with 8,338 acres, Arizona (1303 acres), California (828 acres), New Mexico (470 acres), Missouri (400 acres), Kansas (70 acres) and Tennessee (50 acres). (Table 2)

In terms of *yield* from 2000 production, there were approximately 8,541 bales of organic cotton harvested from 10,799 acres for an overall average of 0.9 bales per acre. Per state averages were often higher (Table 3), with some individual farmers experiencing yields from two to three bales per acre.

The reason for the decreased number of planted acres in 2001 was primarily (79%) due to one farmer in New Mexico who grew large acreage and, upon losing it all to a drought, decided to withdraw from the organic cotton business. Planted acres of organic cotton in Kansas and Tennessee actually increased from 2000-2001, while production in Arizona, California, Missouri and Texas experienced decreases, but not significant. (Table 4). The decrease also reflected economic problems farmers faced in the overall farming economy, lack of pre-plant contracts, and unreliable sales of organic cotton during those years.

However, U.S. organic cotton farmers particularly in Missouri and Texas are optimistic for slightly increased acreage over the next 5 years as market stability occurs and companies develop programs to source organic cotton locally.

### **International Organic Cotton Production Data: 2000-2001**

According to a November 2001 survey conducted by the Pesticide Action Network in the United Kingdom (PAN-UK), Turkey and the United States are currently producing approximately the same amount of cotton.

Most organic cotton is grown in Turkey (29% ) and the United States (27%). Other major producers are India (17%), Peru (9%), Uganda (5%), Egypt (3%), Senegal (3%) and Tanzania (3%). (PAN-UK 2001)

According to the report, approximately 5,950 metric tons of organic cotton were grown in 11 countries in 2000/2001. This production amounts to approximately 0.03 percent of cotton production world-wide: Turkey (1750 metric tons), the United States (1625 metric tons), India (1,000 metric tons), Peru (550 metric tons), Tanzania (250 metric tons), Egypt (200 metric tons), Uganda (275 metric tons), Senegal (200 metric tons), Greece (50 metric tons), Brazil (20 metric tons) and Benin (3 metric tons).

New production of organic cotton production in Pakistan and China will likely see growth in the years to come.

### **Markets for Organic Cotton**

#### **Why are Companies Seeking Organically Grown Cotton?**

Many apparel and textile companies are scrutinizing their environmental practices and considering ways to make their product lines more environmentally sustainable in the long term. They know, for example, that in 2000, cotton was the second most heavily pesticide sprayed crop (behind only corn), with more than 84 million pounds of pesticides applied to 14,415,000 U.S. acres of upland cotton. This represents an average of 5.8 pounds of pesticides per acre of cotton. (USDA/NASS).

#### **Trends in the Organic Cotton Marketplace**

According to OTA's 2001 *Manufacturer's Market Survey* of its membership, there has been 22 percent annual growth in the organic fiber industry over the last five years. The biggest area of growth was in the non-clothing arena (linens, other household furnishings, and personal care products). This sector experienced a 39 percent increase during that period, most likely due to the fact that it is easier to sell such products in health and natural food stores where customers are more educated about organic agriculture and products. (OTA 2001) The clothing industry experienced a more sedate 11 percent growth over the past five years, most likely due their limited presence in the health and natural foods and to the "fickleness of fashion."

According to the survey, "All types of organic fiber companies, however, are optimistic about the future. As cash flow problems and distribution issues get worked out, supply becomes more reliable, and more colors and types of fabric become available, responding companies report they expect to grow by more than 50% from 2000-2001 and at an annual average growth rate of 44% over the next five years. Clothing, in particular, expects to see a 58% growth in the next year alone."

There are a number of companies driving the expanded use of domestic and international organic cotton. For example, Nike has recently decided to increase the percentage of organic cotton it blends with conventional cotton from three to almost 6 percent by Spring 2003 and to develop 100 percent organic cotton products as early as the Fall 2002 season. Other companies, including Cutter and Buck, Timberland, Norm Thompson Outfitters and Hanna Andersson are either using or developing extensive blended or 100 percent organic cotton product lines.

These and other leading retail apparel companies attended a training session on integrating organic cotton into product lines offered by OTA in May 2001 at its All Things Organic™ Conference and Trade Show, and have met since then to explore in detail the steps needed to make the conversion more efficiently and rapidly.

Lastly, companies using organic cotton will now be able to use the well-recognized "Seal of Cotton" on their products. Although some work remains to refine guidelines on licensing, OTA anticipates progress in this area and will be monitoring changes in sales by its organic fiber council members who use the Seal of Cotton. Several companies already use the Cotton Council International's "COTTON USA Mark."

#### **Development of Organic Fiber Processing Standards**

To address what materials can be used in processing and finishing organic fiber, and how to label the finished products, OTA is completing processing standards, supported by a grant from the U.S. Environmental Protection Agency. The standards would prohibit the use of environmentally hazardous processing agents, but permit the use of a limited sub-set of dyes that

meet strict environmental standards. They also create different labels for finished products based on the percentage of organic content (e.g., 100 percent, 95 percent or more, 70-95 percent, or less than 70 percent).

The fiber processing standards will evolve as the industry grows, and are intended to form the basis of future federal standards. In the meantime, the only post-harvest provisions included in the national organic standards state that “goods that utilize organic fibers in their manufacture may only be labeled as a ‘made with...’ product; e.g., a cotton shirt labeled ‘made with organic cotton.’” (USDA) The Federal Trade Commission has stated that listing the percent of organic cotton content on the garment label is allowed.

### **Farmers’ Organic Cotton Research Needs**

When Cotton Incorporated awarded its first organic cotton research grant to OTA last year, it also asked OTA to determine the agricultural research needs of organic cotton farmers.

Overall, the farmers and farmer associations OTA interviewed noted research needs using methods and/or materials that meet federal organic farming standards. In particular, they noted insect and weed management, defoliation and soil fertility. Insect management research would focus on lygus, boll weevil and bollworm problems. (Table 5)

Although growers in each of the regions had different specific research needs, for example, boll weevil in the Mid-South and South, and lygus in California, there were also strong commonalities, such as defoliation. By state, Arizona growers noted weed and insect management and defoliation; Californians mentioned lygus control, soil fertility, and defoliation; Missouri farmers discussed boll weevil management; New Mexico growers cite pink bollworm; Tennessee farmers mentioned weed management; and Texans list defoliation, soil fertility, weed, boll weevil, bollworm and pink bollworm management, and organic techniques to keep drip tape unclogged. (Table 6)

However, several farmers stressed that agricultural research wouldn’t help if they didn’t have markets for their organic cotton. Thus, several asked that ways to develop consistent markets, and markets for higher end grades, also be a focus of research.

### **Conclusion**

The Organic Trade Association is heartened by the optimism of its members, as evidenced in its recent market survey, as well as by increased interest from several major companies considering adding large quantities of organic cotton to their product lines in the next two years. OTA foresees increased acreage both domestically and internationally in the years to come.

### **References**

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Table 1. Estimates of United States Acreage Planted with Organic Cotton: 1990-2001.

<b>Year</b>	<b>Acres</b>
1990	900
1991	3,290
1992	6,305
1993	12,402
1994	15,856
1995	24,625
1996	10,778
1997	9,050
1998	9,368
1999	16,785
2000	13,926
2001	11,459

Table 2. U.S. Acreage Planted with Organic Cotton by State: 2001.

<b>Rank</b>	<b>State</b>	<b>Acres</b>
1	Texas	8338
2	Arizona	1303
3	California	828
4	New Mexico	470
5	Missouri	400
6	Kansas	70
7	Tennessee	50
TOTAL		11,459

Table 3. Average U.S. Organic Cotton Yields Per Acre: 2000\*.

<b>State</b>	<b>Bales/Acre</b>
Arizona	2.0
California	1.1
Kansas	0.2
Missouri	0.9
New Mexico	0.9
Texas	0.2

Average 0.9 bales per acre  
(\*480-pound bales)

Table 4. Percent Change in U.S. acreage planted in organic cotton: 2000 to 2001.

<b>State</b>	<b>Percent Change</b>
Arizona	- 8
California	- 17
Kansas	+ 52
Missouri	- 27
New Mexico	- 79
Tennessee	+ 100
Texas	- 4
Average	- 18

Table 5. Organic Cotton Farmer Agricultural Research Needs \* (All using methods and/or materials that meet organic farming standards.)

<b>Identified Research Need</b>	<b>Number of Respondents</b>	<b>Comments</b>
Weed management	8	
Insect management	7	lygus, boll weevil and bollworm
Defoliation	6	
Soil fertility	2	

In addition, farmers noted the need for research into markets.

(\*One respondent, the Texas Organic Cotton Marketing Cooperative, represents 24 farms.)

Table 6. Organic Cotton Agricultural Research Needs by State:

<b>State</b>	<b>Research Need</b>
Arizona	Weed control, biological insect control (non-specific), defoliation
California	Defoliation, weed control, lygus control, improving soil fertility.
Missouri	Boll weevil management
New Mexico	Pink bollworm
Tennessee	Weed management
Texas	Defoliation, increasing soil fertility, weed management, boll weevil, bollworm and pink bollworm management, how to keep drip tape unclogged with organic techniques.