

# **Locally Grown: Examining Attitudes and Perceptions About Organic Cotton Production and Manufacturing Between Mississippi Cotton Growers and Consumers**

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*The purpose of this study is to examine attitudes and perceptions about organic cotton of Mississippi cotton growers and producers in comparison to fashion-conscious consumers, including advantages/disadvantages of growing and production processes, quality control, consumer preferences, and competitive price structures/profit margins. A sample size of 16 local Mississippi growers and/or producers and 44 undergraduate students at a mid-major Southeastern university were chosen to participate in the study. Instruments were developed based on current research and the definition of organic cotton production defined by the United States Department of Agriculture. Results indicate 75% of growers and producers do not perceive a quality difference between organic and conventionally grown cotton, while 72.7% of the consumers report organically grown cotton is capable of producing a higher quality product compared to conventionally grown cotton. Even with an increase in organic cotton prices (25-40% higher premium), only 25% of growers and producers would be willing to convert, while a majority (52.3%) of consumers would not be willing to spend more than 25% extra for an organically grown cotton product. Consumers indicate the negative effects of conventionally grown cotton, yet many report little knowledge about organic cotton production, while growers/producers immediately dismiss organically grown cotton as a retail marketing strategy.*

*Keywords:* cotton, organic, consumer, grower

## **Introduction**

Cotton accounts for producing a multitude of products that meet the demand of the everyday consumer and remains one of the most popular natural fibers on the apparel market (Cotton Incorporated, 2011). From an economic standpoint, cotton is an essential crop that has a cash value of over \$6 billion per year, and it accounts for \$35 million of the United States Gross Domestic Product (Cotton Incorporated, 2014). Although the sale of organic products has shown a positive growth rate, a limited number of U.S. cotton growers have converted to organic production with a majority from the Southwest Texas region (Funtanilla, Lyford, & Wang,

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2009). The organic cotton apparel market soared to \$7.4 billion dollars in sales in 2012 according to the annual report published by the Textile Exchange (2013). In previous years, double digit retail sales growth has prompted such companies as H&M, Zara, Nike, Patagonia, and others to commit to sourcing 100% organic cotton by the year 2020. Currently, the top 10 sourcing companies of organic cotton demand in excess of 30 million pounds per year with that number potentially exceeding 100 million pounds (200,000 bales) demanded by 2020. In order for the U.S. cotton industry to exceed future expectations and continue global market dominance, participants in the supply chain must not only focus on immediate profitability but also focus on building and promoting awareness of the sustainable organic cotton market (Adams, Boyd, & Huffman, 2015). Therefore, the purpose of this exploratory study is to examine organic cotton attitudes and perceptions of Mississippi cotton growers in comparison to fashion-conscious consumers. Specifically, this study compares the environmental impact of conventional cotton, quality of fibers, and price premiums. There are few studies examining either the perceptions of growers and consumers in direct regard to organic cotton production, price, and value. It is hypothesized that fashion-conscious consumers are not eager about paying the higher price for organic fabric unless the fabric is associated with a popular brand or retailer. While farmers may benefit from the higher profit margin and the potential reduction of chemicals, it is hypothesized that they will not have significant understanding about the organic cotton market consumer perceptions.

### **Organic Cotton Production**

In the past decade, industries across the globe have taken the initiative to incorporate sustainable practices into their daily operations. For example, Cotton Incorporated (2014) is one non-governmental organization that moved towards sustainability before it gained significance in the global marketplace. As defined by the U.S. Department of Agriculture (USDA, 2007):

Organic production is not simply the avoidance of conventional chemical inputs, nor is it the substitution of natural inputs for synthetic ones. Organic production entails the use of cover crops, green manures, animal manures, and crop rotations to fertilize the soil, maximize biological activity and maintain long- term soil health. (para. 13)

Conventionally grown cotton is perceived to be a harmful fiber due to the use of synthetic chemicals and pesticides, while traditional cotton growers are perceived to lack understanding of the organic cotton market and its increasing demand (Chouinard & Brown, 1997). Barriers, including startup costs, long certification processes, and lack of profitability measures, keep growers and producers from converting to organic production practices. Without profitability assurance, growers remain hesitant about farming organically despite the sustainable advantages and health benefits that result from organic production (Funtanilla et al., 2009).

According to the Organic Cotton Market Survey (USDA, 2014), the U.S. is anticipating planting only 19,000 acres and harvesting 11,900 bales by 2020 if growth projections are maintained. This would amount to the U.S. producing 5.9% of the global organic cotton demanded by only ten of the world's largest retailers while countries like India are currently producing over 100,000 bales of organic cotton annually (representing 61% of total global production). Within countries like India, China, and Turkey, the shift to organic production is seeing increases of 20-25% in production over conventional cotton. According to a recent USDA (2014) Organic Cotton Market Summary, four of the eight areas of opportunity for organic cotton production are directly related to market development and policy revision. Organic cotton production in the U.S., while largely based on geographical and climate conditions, sits on the cusp of a major economic shift in the retail and apparel industries within the next five years. Neglect of market demands by U.S. cotton growers will present a detrimental global environment for not only domestic organic cotton production but could potentially threaten the export of conventionally grown cotton, as well.

### **Organic Cotton Consumer Market**

Consumers' opinions on organic cotton and the benefits differ; not everyone is willing to pay a higher price for a product that has health and environmental benefits, unless it is associated with a popular brand or retailer with high quality. According to Gam (2011), consumers hesitate to purchase sustainable clothing because they have a higher markup with shallow assortments and functionality disadvantages, and consumers are skeptical about the environmental benefits due to lack of information about the products. If consumers do choose to add value to organic cotton, the attributes that lead to consumer value are "comfort, health, and conservation" (Chen & Wei, 2012, p. 441).

Based on this information, it is anticipated consumers are not positive about paying a higher price for organic cotton products, unless the product is associated with a popular brand or retailer. Even if fashion-conscious consumers agree with sustainable initiatives, they are still not aware that they may or may not be purchasing organic cotton products due to a lack of consumer awareness programs and product information available. Without the demand and ease of market conditions from the consumers, growers/producers will continue to opt out of organic growing practices. Discussions of stakeholder concerns relate directly to the difficulty and lack of immediate economic return on organic cotton production. Farmers and growers find it difficult and economically unfeasible to shift current conventional cotton production to the strict regulations of organic cotton production despite consumer willingness to pay up to 25% more for organic cotton (Ellis, McCracken, & Skuza, 2012).

## Methodology

A convenience sample of local Mississippi cotton growers ( $n = 16$ ) and undergraduate students enrolled in the Fashion Design and Merchandising ( $n = 44$ ) program at a mid-major Southeastern university were chosen to participate in the study. Growers were selected based on their location (Mississippi Delta region) and if they were actively growing cotton in crop rotations. The consumer group targeted was predominately female ( $n = 42$ ) with ages ranging from 18-24 years. Fashion design and merchandising undergraduates provide a sample of fashion-conscious consumers with the assumption of knowledge about organic fibers for apparel based on previous courses and overall interest in the apparel industry. Instruments were developed based on current research of organic cotton production defined by the USDA and modified for content validity by regional Extension professors and Cotton Specialists. The growers' survey and the consumer survey were administered electronically; paper versions were made available upon request. Surveys for regional Mississippi growers and/or producers were distributed during the Cotton Row Crop Short Course hosted by Mississippi State University Extension Service in December 2013. Following the informed consent for participation in the research study, participants completed a brief survey on perceptions of organic cotton production. Results from single-item measures indicated the level of awareness and understanding of the two groups, as well as attitudes and perceptions regarding organic cotton and its quality and price margins.

## Results

Frequency analysis indicated unique findings on the perception of organic cotton from the viewpoints of local Mississippi growers and consumers. For the Mississippi growers, 76.5% of the sample reported cotton growing practices are not done organically, as defined by the USDA, on individual farms. Therefore, 82.4% indicated traditional cotton production does not negatively affect the environment. When identifying growers' attitudes about organic cotton production being a marketing strategy, 52.9% believed that the organic cotton movement is simply a retail marketing strategy targeting consumers to charge a premium price. If growers were to see at least a 25-40% price premium difference between organic and conventional cotton, only 25% of the growers would be willing to convert to organic cotton production, while 37.5% would not convert to organic cotton production no matter the premium price increase.

From the consumer perspective, 63.6% indicated some to no familiarity with organic cotton production. However, 81.8% of consumers reported organic cotton production, as outlined by the USDA, could improve the environment despite the aforementioned lack of familiarity with production methods. Additionally, 40.9% had little to no awareness about whether current personal clothing items were made from organic cotton. Despite a lack of understanding of production and limited awareness about current personal organic clothing choices, 52.3% of the consumer group was willing to pay 10-25% more for clothing made from organic cotton.

Frequency comparisons indicated strong disconnects on environmental factors, fiber quality, and price related to the organic cotton market between growers and consumers. Over 80% of growers believed that conventional cotton production does not present negative effects on the environment. Yet, over 62% of consumers surveyed reported that organic cotton production could improve the environment. There exists a perceived fiber quality difference between growers and consumers as 75% of growers indicated that they do not perceive a quality difference between organically and conventionally grown cotton; however, 72.7% of the consumers perceive organically grown cotton as capable of producing a higher quality product compared to traditionally grown cotton. Even with an increase in organic cotton prices (25-40% higher premium), only 25% of growers and producers would be willing to convert, while a majority (52.3%) of consumers would be willing to spend up to 25% more for an organically grown cotton product (see Table 1).

**Table 1. Descriptive Data for Growers and Consumers' Perceptions of Organic Cotton**

	Growers	Consumers
<i>Environmental Impact of Conventional Cotton</i>		
Positive	82.4%	18.2%
Negative	17.6%	81.8%
<i>Quality of Fiber</i>		
No Difference	18.2%	2.63
Significant Difference	81.8%	2.38
<i>Price Premium (+10 – 25%) for Conversion to Organic</i>		
Convert	25%	-
Not Convert	75%	-
<i>Price Premium (+10 – 25%) for Organic Products</i>		
Will Pay	-	52.3%
Will Not Pay	-	47.7%

## Discussion

Based on these exploratory results, differences existed between regional cotton growers and consumers. Consumers indicated the negative effects of traditionally grown cotton, yet many reported little to no knowledge about organic cotton production. Conversely, growers dismissed organically grown cotton as a retail marketing strategy with little to no understanding of consumer motivations nor intimate knowledge about apparel production practices. If the initial and final partners of the supply chain are reporting different perceptions and attitudes about organic cotton, the breakdown of communication and information exchange limits the ability to create a sustainable future for the organic cotton industry. Increasingly, large global companies, such as H&M, Zara, and Nike, are committing to using more organic cotton based on consumer demand with the top 10 companies using organic cotton exceeding over 3 million pounds each (Textile

Exchange, 2013). With a limited number of cotton producing countries regulating organic farming operations, it will become more difficult for U.S. cotton farmers to remain globally competitive in the shadow of increased demand from major apparel companies for organic cotton. Based on the stringent certified organic regulations imposed by the USDA, growers will not be able to financially compete with small scale and unregulated international organic cotton production. As domestic growers and producers continue to neglect consumer demands and apparel company-sourcing initiatives, they will fail to capitalize on a growing market segment in an already competitive global cotton market.

Without efficient and authoritative information and public relations, organic cotton will continue to struggle to gain a foothold in a marketplace dominated by sustainable synthetics.

Recommendations based on this research include incorporating consumer perceptions into the discussion on organic cotton through Extension Services to relate this information to growers about end-use demand. By attending regional conferences and informational sessions related to marketing campaigns, growers and consumers can work towards dissolving the gap between the respective perceptions and attitudes of organic cotton production. The Organic Trade Association (2013) is responsible for promoting organic production standards to the industry. Therefore, promotional activities geared towards boosting growers' plus consumers' confidence in organic production would help the sustainable initiative gain momentum in various regions other than the Southwest. In addition, consumers need additional information to make an informed buying decision about organic cotton, including a cost-benefit analysis of organic cotton products compared to conventionally grown cotton products and efficiency measurements to determine if organic growers and/or producers can reach maximum output using organic techniques. While these recommendations may not resolve issues highlighted by this research, efforts to increase the transparency of information along the supply chain may better promote sustainability and discussions related to environmentally-friendly sourcing practices. For further study, an expanded sample would need to include other regions, such as the Southwest where organic cotton production is more popular, as well as a broader consumer base.

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