



COTTON USA™
THE COTTON THE WORLD TRUSTS

THE TRUE COST OF U.S. COTTON

INDEPENDENT STUDIES SHOW COTTON USA™ CAN SAVE MILLS MILLIONS OF DOLLARS A YEAR.



TO LEARN MORE ABOUT COTTON USA SOLUTIONS®, [CLICK HERE.](#)

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INTRODUCTION

The COTTON USA SOLUTIONS® Technical Team of spinning experts work with one objective: to help your mill get the best technical and financial value from the world's best performing cotton. Our COTTON USA SOLUTIONS® Technical Team has visited over 1,500 mills that use U.S. cotton as a primary source of their raw material.

COTTON USA SOLUTIONS® services—which include 1:1 Mill Consults, Technical Seminars, the COTTON USA Mill Mastery® Courses, Mill Studies and the Mill Exchange Program—are complimentary for U.S. Cotton Trust Protocol® members and COTTON USA™ licensees.

Success stories shared by mills we visited in Pakistan, Bangladesh, India, China and the other countries that consume U.S. cotton show that our customers have benefited both technically and financially from COTTON USA SOLUTIONS® support.

Our “Golden Triangle” philosophy, which promotes the involvement of manufacturing management in the cotton purchasing process, has been an important factor in achieving success in mills around the world.



COTTON USA SOLUTIONS® Golden Triangle Philosophy

Collaboration between supply chain and sales, manufacturing management and mill owners in the cotton purchasing process to improve profitability.

Many mills still make decisions about which cotton to purchase based solely on comparative raw material prices. In many cases, raw material purchasing decisions are made by ownership or financial executives who are less involved in the details of the cotton manufacturing process. As a result, they are often not as close to the impact, both positive and negative, that their decisions have on manufacturing performance and ultimately on the profitability of their mills.

INTRODUCTION

Cotton represents almost 70% of the total yarn cost, which leads many to be persuaded by what appears to be a lower price when purchasing. However, research has shown that this isn't the end of the story.

Mills that initially operated on a “buy on price” strategy now understand the importance of developing a raw material purchasing strategy that looks beyond just the cotton price and dives deeper into the real value that purchasing U.S. cotton can bring to their business. Those that implement the “Golden Triangle” philosophy in collaboration with our COTTON USA SOLUTIONS® Technical Team are able to see the bigger picture and make more informed decisions that ultimately benefit the productivity of their business.

THE BENEFITS OF U.S. COTTON, SEEN AND UNSEEN

U.S. cotton has a variety of benefits in comparison to other cotton fibers that ultimately impact profitability for mills and manufacturers. These benefits include: contamination-free fibers, low moisture content, traceability, fiber elongation and more.

Superior Growing Processes Lead to Contamination-Free Fibers

Decades of cutting-edge research, best-practice farming and crop management techniques, high quality seeds, and USDA testing and control are the foundations of the superior quality and performance of U.S. cotton - leading to the development of “contamination-free” cotton.

When fabric and garment manufacturers ask their spinners for “contamination-free” yarns, spinners consistently choose U.S. cotton or Australian cotton as fibers that meet that specification. The International Textile Manufacturers Federation (ITMF) consistently finds U.S. and Australian cottons to be “cleaner” fibers in comparison to fibers from regions where hand-harvesting still prevails.

Hand-harvested cottons from India and many of the West African suppliers are often rife with contamination problems, which means cotton bales from these countries need to be broken down, hand sorted and reconstituted before they can be processed. This tedious process increases costs and extends the timelines for delivery. Even with sophisticated contamination-control equipment, this added risk is one which many spinners are unwilling to take.

Lower contamination levels improve yield, increase processing efficiency and reduce labor costs.

Moisture Content

In addition to monitoring for contaminated cotton, spinning mills must monitor for the moisture content of the fibers. Because cotton is sold on a weight basis, moisture content in the fiber impacts the weight of a bale and, therefore, deeply impacts the efficiency of the cotton purchased. In addition, the moisture content impacts cotton color, length and strength. Consistent moisture levels in cotton fiber are essential to the preservation of quality from the field to the finished garment. For example, the ideal moisture content to gin cotton is 6.6 to 8.0%. If a spinner were to buy cotton with 11% moisture content (often found in some competitor’s cottons), the loss in value of the purchased cotton has the potential to drastically impact profitability.

A significant commercial advantage of U.S. cotton is the superior consistency of its moisture content compared to many of its competitors, an accepted fact throughout the industry. Nobody wants to pay for water when they think they are buying fiber.

Information Leads to Efficiency

One of the key benefits of U.S. cotton is its traceability and transparency, which enables mills to use the information about the bales to select the appropriate fiber, at the cost needed, to produce the product they wish to make. Every bale of U.S. cotton is HVI tested in USDA controlled laboratories, providing data on key technical parameters in every bale, including fiber length, strength, uniformity, micronaire, trash and color.

THE BENEFITS OF U.S. COTTON, SEEN AND UNSEEN

Fiber Elongation

The superior manufacturing performance of U.S. cotton is due in part to its excellent fiber elongation. U.S. cotton is comparatively ductile, giving it greater extension properties in comparison to other cottons and leading to the superior manufacturing performance seen in COTTON USA™ mill studies. Three COTTON USA SOLUTIONS® team members hypothesize that the ductility of the U.S. fibers improves impact absorption and leads to less fiber damage during processing.

U.S. cotton consistently outperformed the compared cottons at every stage of processing (with performance measured by industry-standard manufacturing performance KPIs) in all the independent comparative research studies commissioned by Cotton Council International (CCI).

Additional Efficiencies With U.S. Cotton

Raw material yields and waste levels, machine efficiencies, labor productivity, yarn, and fabric and garment quality were all superior with U.S. cotton. Machine stops in spinning, winding, knitting and weaving were all lower. The consistency of the U.S. fiber meant that fewer changes of dye recipe were required, and the waste generated during garment manufacturing was reduced while first-quality garment production increased.

Importance of Superior Quality in Manufacturing

The disruption caused by the recent pandemic and the strain of the post-pandemic recovery has proven the importance of “right first time” manufacturing.

Given the extended length of the textile supply chain and the importance of speed and on-time delivery to the major brands and retailers, choosing a fiber that allows mills to minimize issues and improve performance is key to delivering the correct, quality product on time.

U.S. cotton fiber’s consistency and its superior manufacturing performance can help mills achieve this objective of “right first time.”

VALIDATION OF SUPERIOR QUALITY THROUGH INDEPENDENT STUDIES

Independent Research Studies

Every year CCI commissions independent, third-party consultants to undertake research projects on topics ranging from comparisons of the technical and financial advantages of different cotton types in various stages of the process, to the impact of fiber quality on garment quality and cost. CCI is the only non-profit organization in the global cotton industry conducting major third-party research projects. To date, we have completed eight studies across four countries, all based on controlled on-site mill testing by independent consultants.

COTTON USA SOLUTIONS[®] Mill Studies
available for download on cottonusa.org.

The True Cost of U.S. Cotton

While U.S. cotton generally trades at marginally higher prices than competitor cottons, it also performs significantly better in manufacturing. It is very important when carrying out comparative cost studies to consider all factors that influence manufacturing cost, not just initial fiber price.

All independent studies commissioned by CCI have demonstrated the technical and financial superiority of U.S. cotton when compared to cottons from Brazil, West Africa, CIS and India in the manufacture of knitted garments.

U.S. Cotton Proves Profitability: Indian Mill Study

COTTON USA[™] commissioned an independent research study at a partner mill in India in 2020 that compared cotton production using four cottons: Shankar 6, Brazil, West African Plebe and U.S. cotton.

The mill paid the following price per pound for each type of cotton:

Cotton Type	Price per Pound
Shankar 6	\$0.71
Brazil	\$0.77
West African Plebe	\$0.78
U.S.	\$0.79

VALIDATION OF SUPERIOR QUALITY THROUGH INDEPENDENT STUDIES

Based on an exchange rate of 74 Indian Rupees to the dollar at the time, the profit per garment calculated by the partner's mills financial team was as follows:

Cotton Type	Price per Garment
Shankar 6	\$0.66
Brazil	\$0.71
West African Plebe	\$0.80
U.S.	\$0.88

Despite a disadvantage of 8 cents per pound in the initial raw material price, the garments produced with U.S. cotton generated a profit per garment 22 cents higher than the initially cheaper local cotton.

This pattern of recovering an initially higher raw material price for U.S. cotton in higher garment profits by the end of the process chain has been repeated in all independent comparison projects commissioned by CCI.

U.S. Cotton Proves Profitability: Bangladeshi Mill Study

Earlier this year, CCI partnered with a leading textile group in Bangladesh to compare the technical and financial performance of producing a Ne 16/yarn for denim end-use. The group substituted a mix of 100% U.S. cotton for the West African/Brazilian cotton blend the mill was previously using.

Though the technical parameters of 50% of the U.S. cotton bales available for the trial were considered to be unsuitable for fair comparison, the trial continued with U.S. cotton bales with a shorter length, lower strength, higher micronaire and greater short fiber index (SFI) than the mix of West African and Brazilian cottons.

VALIDATION OF SUPERIOR QUALITY THROUGH INDEPENDENT STUDIES

Despite these inherent disadvantages, the yarns produced from the 100% U.S. cotton mix were of equal or superior quality and, most importantly, the yield from the U.S. fiber was significantly better than that achieved with the regular West African/Brazil mix.

The analysis of blowroom and carding waste showed on average a waste loss of between 8.4 to 9.2%, rising on occasions to as high as 11.5% when only Brazilian cotton was available.¹

During the trial, the waste level in those two departments was only 7.2% with the 100% U.S. cotton mix, and our partner's management team stated that with some fine-tuning, a level below 7% could be achieved.¹

Switching from the West African/Brazil blend to a 100% U.S. cotton mix could generate an annual savings of almost \$5 million.¹

THE BOTTOM LINE

All referenced CCI-commissioned, independent research studies, as well as the work of the COTTON USA SOLUTIONS® team over the last 3.5 years, have consistently proven that the quality of U.S. cotton leads to increased profitability for mills.

Though U.S. cotton may often be the more expensive option when compared purely with other cottons in a simple raw material price comparison, the many advantages of U.S. fiber can greatly diminish or even eliminate that initial price disadvantage.

This combination of superior U.S. cotton fiber and the expertise of the COTTON USA SOLUTIONS® Technical Team can make these savings a reality in your mill.

To contact a COTTON USA representative for more information about U.S. cotton or to become a COTTON USA licensee, [click here](#).

REFERENCES

¹PERFORMANCE STUDY OF 100% U.S. COTTON VS. BRAZIL AND WEST AFRICAN COTTON MIX

**FOR MORE COTTON USA™ MILL STUDIES,
CLICK THE LINKS BELOW.**

[AN EVALUATION OF THE DURABILITY ADVANTAGES OF USING U.S. COTTON
IN KNIT FABRICS](#)

[AN EVALUATION OF THE FIBER PROCESSING ADVANTAGES OF USING U.S.
COTTON IN KNITTED FABRIC/GARMENT MANUFACTURING](#)

[AN EVALUATION OF THE FINANCIAL ADVANTAGES OF USING U.S. COTTON IN
KNITTED FABRIC/GARMENT MANUFACTURING](#)

[THE TECHNICAL AND FINANCIAL ADVANTAGES OF USING U.S. COTTON-RICH
YARNS IN KNITTED FABRIC AND GARMENT MANUFACTURING](#)

[NEW TESTING PROCEDURE AT TURKISH MILL GENERATES EQUIVALENT
SAVINGS OF 7 CENTS PER POUND](#)