



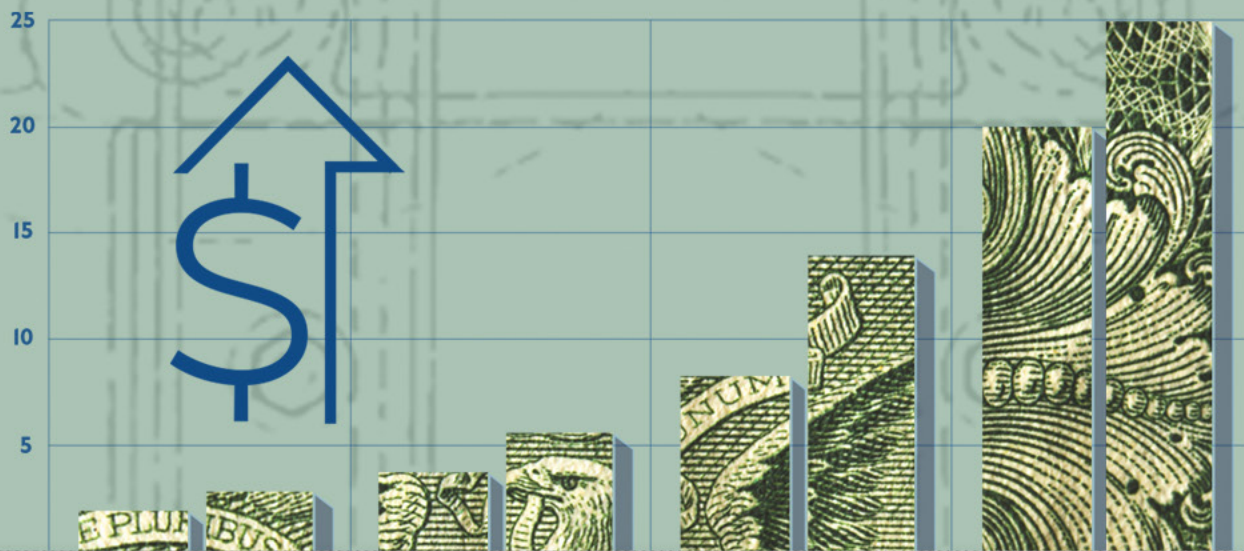
COTTON USA™
THE COTTON THE WORLD TRUSTS

AN EVALUATION OF THE

FINANCIAL ADVANTAGES

OF USING U.S. COTTON IN KNITTED FABRIC/GARMENT MANUFACTURING

A RESEARCH MILL STUDY FROM COTTON USA SOLUTIONS®



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BACKGROUND

In the fall of 2016, two experienced textile-consulting firms (Triblend Consultants and Custom Technical Solutions) completed a study at a fully integrated manufacturer in Bangladesh. This is a company that is an established supplier of knitted and woven garments to many leading brands and retailers in Europe and the United States. While this manufacturer traditionally uses Indian cotton, they purchased CIS and U.S. cotton from their usual merchants in order to complete this study. The three input cottons were comparable in quality and all were run on the same machinery following the same procedures in order to isolate any differences to the cotton.

There were three cottons: Indian (Shankar MCU-5), CIS (1-1/8") and U.S. (Upland 1-1/8"). All were spun into Ne 30/1 carded ring spun yarn and made into a single jersey singular knit product in four colors—white, pink, navy and navy plus enzyme.

CONTROL PROCEDURES

In order to make sure that a fair comparison was conducted between the different cottons, a serious attempt was made to maintain similar average values of basic fiber properties in the three cotton mixes. All cotton bales were tested using the AFIS available in the company's laboratory.

The fiber properties of the three cotton mixes (i.e. Nep quantity and size, Short Fiber Count and Immaturity Index) showed some differences but were similar enough to make the test results valid. (The detailed analyses of the three fibers are available from CCI.) Other fiber properties that are largely influenced by production and storage conditions showed some variations, but generally were close enough to each other to ensure that differences in performance were largely due to the quality of the cottons based on origin.

With these controls (fiber quality and processing) in place, the experimenters believe that differences in performance are related to cotton country of origin, rather than variations within each country.

**THE INITIAL COSTS OF THE COTTONS WERE:
INDIAN \$0.84/LB., CIS \$0.92/LB., U.S. \$0.87/LB.**

FINDINGS—YARN PROCESSING

The yarn processing performances of the 3 cottons were evaluated on multiple criteria, including machine stops, average time down and waste. But the economic analysis was most impacted by fiber loss during spinning.

U.S. COTTON MADE UP MOST OF ITS COST DISADVANTAGE IN SPINNING

Fiber loss during spinning was most obvious in Indian cotton with nearly a 17% fiber loss. After spinning, U.S. cotton was only 1 cent per pound more expensive than cotton from India.

	100% U.S. cotton	100% Indian cotton	100% CIS cotton
Opening price / lb.	\$0.87	\$0.84	\$0.92
% loss of fiber	14.63%	16.96%	13.65%
Price after spinning / lb.	\$1.02	\$1.01	\$1.06

FINDINGS—YARN PROCESSING

AFTER KNITTING, DYEING AND FINISHING U.S. COTTON IS THE LEAST EXPENSIVE ALTERNATIVE

Fiber loss during dyeing and finishing is significantly higher for Indian and CIS cotton and after finishing U.S. cotton is lower than Indian cotton by 3 cents per pound.

	100% U.S. cotton	100% Indian cotton	100% CIS cotton
Price after spinning	\$1.02	\$1.01	\$1.06
Knitting fiber loss	\$0.00	\$0.01	\$0.01
Dyeing and finishing fiber loss	\$0.01	\$0.04	\$0.03
Price after finishing / lb.	\$1.03	\$1.06	\$1.10

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CONCLUSION

COTTON USA's team of experts has visited over 100 mills worldwide to offer our partners something that will truly elevate their business: our COTTON USA SOLUTIONS® program. [Learn more here.](#)

TO LEARN MORE, PLEASE CONTACT YOUR LOCAL CCI REPRESENTATIVE. [CLICK HERE.](#)

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