

SRRC COTTON RESEARCH: CHANGING WITH THE PUBLIC'S NEED
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Abstract

After the July 2002 SRRC Cotton Program review, a panel of industrial and university advisors recommended that we could respond better to industry needs and increase the impact of our research by reducing the number of active projects. As part of the response, the cotton research units at SRRC have been completely reorganized. The three former cotton management units (Cotton Textile Chemistry, Cotton Fiber Quality, and Cotton Textile Engineering) were abolished. Scientists in these units were reassigned to two new and larger management units: Cotton Structure & Quality (CSQ), and Cotton Chemistry & Utilization (CCU).

CSQ

A major thrust in CSQ is the demonstration of the utility of new measurements of cotton quality, involving short fibers, neps, and maturity. These measurements will be included in a comprehensive database that also includes many yarn and textile properties for each of the cotton samples furnished to the SRRC by academic, industrial, and governmental collaborators. Broken fiber is being evaluated as an alternative to short fiber as an indicator of quality problems due to fiber damage. In addition, new research regarding the effects of varying moisture on the microstructure of cotton is being pursued with microscopy, crystallography, and computer modeling.

CCU

Scientists in CCU have developed projects that re-emphasize areas of investigation that originally established SRRC's reputation as a world leader in cotton research, i.e., cotton crosslinking with decreased loss in strength, and new flame retardant treatments for cotton at decreased cost and greater effectiveness. Research is also centered on the use of ultrasound with both conventional and enzymatic techniques for improved fabric preparation. Finally, the unit has a major thrust toward development of new products (sizeless, medical, and nonwoven fabrics) for bulk utilization of cotton.

Overall, these two new SRRC Management Units aim to serve the U.S. cotton industry and consumers by generating information for optimizing processing efficiency and product quality.