

**NATURALLY PIGMENTED COTTON  
IN COMMON AND COMPOSITE TEXTILES**

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**Abstract**

This study examines the color attributes and physical properties of naturally colored cottons, and compares yarns and fabrics made from the fibers using conventional and patented methods. Naturally pigmented cotton grows in earthy shades of green, red and brown, instead of the common white varieties. Although the plants have been cultivated for thousands of years, commercial processing of their fibers was restricted because they were typically short and weak. Breeders have improved the fiber properties to some degree, and the resulting textile properties are better, particularly when staple-core and filament-core methods are used. The associated yarns and fabrics have generated considerable market appeal because of the ecological benefits and potential cost savings of not requiring chemical dyeing. Government scientists have shown that using the naturally pigmented fibers in ARS-patented composite yarns and fabrics can produce textiles that are stronger and more serviceable than their conventional counterparts. This study reports on some of their comparative properties.