



Southern University and A&M College System
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Research Impact

Benefits from State & Federal Partnership

HUMAN NUTRITION HEALTH, FAMILY AND CONSUMER SCIENCES

TOPIC

Enhancing Aesthetic Characteristics of Kenaf Fiber for Apparel Fabrics

ISSUE

The need to reduce waste and to make textile products that have biodegradation potential is of paramount importance. Agricultural products/wastes/derivatives are receiving more attention because of their potential as raw materials for biodegradable value-added products. Kenaf is one of the crops being investigated in the Southern Regional Project for fiber. This plant could be an interesting and important apparel fiber because of its natural beauty. However, work is needed to improve the fiber for apparel applications and to further investigate its alternative uses.

WHAT HAS BEEN DONE?

Researchers at the Southern University Agricultural Research and Extension Center (SUAREC) extracted kenaf fibers using bacterial and chemical retting processes. Yarns were spun from kenaf/cotton blends using ring and rotor spinning methods. Yarns have been characterized to document various properties that are pertinent for processing and use of the fiber. Tests included tenacity, twist, extensibility, and hand evaluation. Electron microscopy and image analysis were done to compare surface properties of the yarns. Statistical analysis was conducted to determine if significant differences exist between the test samples. A master's thesis has been completed on this topic and several abstracts have been published.

IMPACT

The research conducted is adding new knowledge in the processing of kenaf for apparel applications. The research is also refining fiber extraction methods that can be applied to other bast (stem) fibers. The research topic is of significant importance to SUAREC and the State of Louisiana. The project was featured in the local paper "the Advocate" in the Science and Technology section as one of the priority projects in the University and in Louisiana. Because kenaf has to be blended with a high percentage of cotton (at least 50%), increased use of this fiber will expand the uses of cotton which is an important crop in Louisiana. The products resulting from kenaf have unique aesthetic properties that closely resemble the more expensive linen and that appeal to many consumers who are interested in "natural-looking" fabrics.

WHO TO CONTACT?

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