

Designing eco-friendly fabrics from naturally colour linted cotton

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■ **ABSTRACT** : Two genotypes of naturally brown coloured cotton yarns viz., Dharwad desi colour cotton – 1 (DDCC-1) and Dharwad brown hirsutum – 250 (DBH-250) were woven on handloom with white cotton and filature silks (Muga and Tasar) to produce user and ecological friendly fabrics. Japanese kawabata evaluation aystem assessed these union fabrics for their performance. The results revealed that union fabrics showed higher tensile, bending, shear, compressional and surface property values indicating the fabrics having low bending rigidity and fabric density, greater flexural rigidity, coarse and rough to handle than their corresponding control samples. Koshi (stiffness), numeri (smoothness), fukurami (fullness and softness) and sofutosa (softness) were the primary hand values of KES (FB) in turn assisted to rate the total hand value. The total hand value expressed that these union fabrics are most suitable (good to excellent) for women's winter thin dress and fairly suitable (fair to good) for women's winter suits. Thus, newly woven union fabrics being new and unique of its kind are not only suitable for dress material but also as furnishings. All along its length, the handspun DDCC-1 yarn showed unequal distribution of slubs and snarls which is an added advantage of fancy appearance and texture of handloom fabric. Therefore, it is a boon for cotton cultivators to grow colour cotton on commercial scale to sustain in both domestic and international market as well as support the handloom sector.

■ **KEY WORDS**: Colour cotton, KES (FB), Surface properties, Tensile properties, Union fabrics

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