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Research Paper

Value addition of mulberry silk waste/ wool blends to develop handloom fabrics

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ABSTRACT : The present study was carried out to add value to silk waste by developing blended as well as union handloom fabrics to increase the fabric range. Blending of mulberry silk waste and 24 micron wool was done at the Gillbox stage and the yarns were spun on worsted spinning system. The blend proportion of 65s:35w considered optimum was spun into 30s and 40s metric count (Nm) yarns to make twill woven fabrics. Two fabrics were developed using blended yarns having 2/30 Nm warp and 30 Nm weft (S_1) as well as 2/40 Nm warp and 40 Nm weft (S_2) yarns. Two union fabrics (S_3) and (S_4) were also made using pure wool warp and developed blended yarns in weft, respectively. Fabrics S_1 and S_2 exhibited excellent drapability, significantly lesser ($p \leq .05$) bending length and flexural rigidity and higher abrasion resistance. Union fabrics S_3 and S_4 had excellent crease recovery, better dimensional stability, good thermal insulation, high breaking as well as tear strength. Fabric S_4 exhibited more drapability, and less flexural rigidity. The cost of production with 65s:35w blended yarn was much lesser in comparison to the yarn made from 100 per cent mulberry silk waste whereas variability from other blends was found to be very less. The estimated cost of blended fabrics developed was Rs. 376.70 per meter whereas the cost of developed union fabric with 100 per cent wool warp and 65s:35w weft was Rs. 327.63 per meter. Such cost effective handloom blended and union fabrics have the potential to enhance domestic and export earnings of the handloom weavers.

KEY WORDS : Blended, Handloom, Mulberry silk waste, Union, Wool, Worsted

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