ABSTRACT

Thesis Title: Performance of Cotton Wool blended Knitted Khadi Fabrics and Consumer Utility of the same

Woolen khadi plays an important role in Indian economy providing large scale employment in rural areas. The main objective of khadi sansthan is to promote and encourage production of hand – made products by the villagers. Crossbred wool are mainly suitable for decentralized handloom sectors, particularly for the manufacturing of shawls, knitwear, fine quality hand knotted carpets, khadi garments and blankets. India produces cross bred fine wool of 22-25 microns and it is suitable for utilization in khadi sector. Today’s consumer demands comfortable, economic and easy to care and well fitted garments which can be washed and worn. This demand is easily met by knits. Main aim of present investigator is to develop trendy knitwear in cotton: wool blended khadi knitted fabrics. For this purpose cotton (Mech I) and wool (Indian cross bred-Rambouillet/local sheep of Jammu and Kashmir and Himachal Pradesh) fibers were selected for the study, to determine compatibility of cotton and wool blend fiber length, diameter/ fineness and stress: strain characteristics of cotton and Indian crossbred wool were determined and then it was used for producing knitted khadi fabrics by using flatbed hand knitting machine. Cotton: wool yarns in 90:10, 80:20 and 70: 30 ratios were prepared in hand spinning system. All the yarns were spun in a count of 55 – 62 tex. 100% cotton yarns were also prepared for base reference and comparative purpose. In blending of Cotton: Wool, Wool contributes warmth, resiliency, abrasion resistance, and drape ability. Cotton adds strength of the yarn and fabric. Both fibers are absorbent and can be blended to make a comfortable, durable fabric. Result of subjective analysis of hand all blends were preferred by judges, as the percentage of wool increases in fabric air resistance and thermal insulation value also increases. They can be used un dyed or dyed by direct and acid dyes, two bath process easily.