



RESEARCH PAPER

Development of blended yarns from agro-waste material-corn husk

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Abstract : The present investigation has been undertaken to develop blended yarns using agro-waste plant materials since the potential of its usefulness is not fully exploited. Development of suitable textile textures may partially address to the eco-concerns. The study was focused on chemical extraction of corn fibres and properties of blended yarns. Corn husks were treated in 1% alkali solution (1:20 material to liquor ratio) at high temperature (85–90°C) for 1 hour. Softening of fibres was done with silicone emulsion (0.5% by weight of fibres) at room temperature. Higher denier value for corn husk fibres (70.09) and low bundle strength (5.00 g/tex) were observed in contrast to hemp and viscose rayon. Length of corn husk fibres (145.71 mm) was lower than hemp fibres with moisture content 8.34%. The extracted corn husk fibres were hand spun in the blend of viscose rayon (70CH:30VR) and hemp (30CH:70HA). Higher tenacity (0.95g/tex) and lower breaking force (759.5g) of CH/HA yarn were found in comparison to CH/VR yarn. Also, higher yarn count 1.31 Ne was observed in case of CH/HA. Both the yarns were considered suitable for developing fabrics for home textiles and apparel.

Key Words : Corn husk fibres, Blends, Viscose rayon, Hemp

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