



Fabrics and Garments from Novel Blends : Cotton with Short Wool/ Angora Rabbit Hair

INTRODUCTION

With the formulation of the GATT agreement and opening up of international trade, the textile business world over has undergone radical changes assuming new dimensions. Trends in yarn requirement show an increasing demand for finer counts specially to produce light weight and soft feel fabrics. Although cotton fabrics are most comfortable, blends with other fibres are always preferred for fulfilment of functional and/or aesthetic requirements that can not be met by using only one type of fibre. Realising this, CIRCOT in collaboration with Central Sheep and Wool Research Institute (CSWRI) has developed a technology for utilisation of short wool fibres in blends with cotton for production of novel fabrics having desirable quality attributes. Machine spinning of Angora rabbit hair, in blends with cotton at commercial working speeds, hitherto an unexplored area, has



Avivastra Sheep



Angora Rabbit

now been made possible. The fabrics produced from blends of cotton and Indian short wool as well as those with Angora rabbit hair are found to have good cover, light weight and rich feel.

HIGHLIGHTS OF THE TECHNOLOGY

Fibres Used :

- (i) Indian cross-breed short wool with fibre diameter of 21-23 microns and length below 40 mm.
- (ii) Indian Angora rabbit hair with fibre length below 40 mm.
- (iii) Medium staple cotton for blending with cross-bred wool and fine cotton for blending with Angora rabbit hair.

Blending and Spinning :

- (i) Burr removal from short wool fibre by mechanical means avoiding use of chemicals.
- (ii) Appropriate lubrication to prevent static charge generation during Angora rabbit hair processing.
- (iii) Effective removal of guard fibres from rabbit hair.
- (iv) Appropriate modification to cotton spinning method for production of ring and rotor yarns from cotton-wool blends and ring spun hosiery yarn from cotton-Angora rabbit hair blends.
- (v) Optimisation of blend composition and processing parameters.



Angora Rabbit Guard Hair Fibres with Contaminants



Opened Angora Rabbit Hair

Fabric Production, Chemical Finishing and Garment Making :

- (i) Production of woven fabrics from cotton-wool blended yarns
- (ii) Production of knitted fabrics from cotton-Angora rabbit hair blended yarns
- (iii) Optimisation of scouring and bleaching conditions
- (iv) Special finishing to impart elastomeric feel and encapsulated aroma, etc.
- (v) Garment production



Avivastra Wool with Burr

END-PRODUCTS

- (i) Tropical rich feel suitings and jackets from twill weave fabrics and plain woven shirts made from cotton and Indian short wool blends.
- (ii) Low shrink, light weight and soft feel inner wear from single jersey and outer wear from double jersey fabrics, particularly suitable for children wear from cotton and rabbit hair.



De-burred Avivastra Wool

TECHNOLOGY ADOPTION

This technology can be adopted by existing cotton and blended yarn spinning mills requiring product diversification and also by small scale spinning units.



Woven Fabric from Avivastra Wool-Cotton Blend

PREFERRED LOCATION OF UNITS

Cotton and Indian short wool blends : Rajasthan, Himachal Pradesh and Punjab

Cotton and Angora rabbit hair blends : Himachal Pradesh and Tamilnadu



Fabrics and End-Products Made from Cotton-Avivastra Wool Blended yarns



Knitted Fabrics from Cotton-Angora Rabbit hair Blended yarns

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