

Manufacturing of blanket (*Kambali*) by traditional methods using Coimbatore sheep wool at Kalangal Village

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Since ancient time, the manufacturing of textile goods has been carried out in India using indigenously produced natural fibres, i.e. wool, silk, ramie, etc. by rural artisans. Although, the techniques used in manufacturing such goods are labour intensive, which makes products costly. These processes are eco-friendly and provide large employment to rural artisans. Apart from this, the products possess good hand and have much acceptance among users. Among the various textile products produced using traditional knowledge, manufacturing of blanket using indigenous traditional knowledge of yarn spinning and blanket weaving from Coimbatore wool is one of the products, which is unique in construction and performance. In the paper, detailed information on availability of wool, its quality, processing technique, conversion of wool fibre into yarn, then yarn to blanket.

Key words: Muthuvan tribes, *Antiaris toxicaria*, Western Ghats, Fiber curing, Maravuri, Kerala

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Wool production and its utilization in South India are traced back to early colonial period¹. In one of the earliest descriptions, Francis Buchanan-Hamilton wrote of the *Kurumbas* near the present-day textile town, Coimbatore. According to him, the *Kurumbas* are all of Karnataka origin. Their sole occupation was feeding their flocks by extensive grazing, and weaving their wool into coarse blankets. Each man possessed from fifty to one hundred sheep, which he grazed on the fields all day without paying any rent; and at night as of now they folded them on the aerable lands of the cultivators, who used to give a *Bulla* (standard measure of 2-3 kg) of grains to shepherd in exchange of the manure of one hundred sheep².

History of blanket weaving from woolen yarn is also very old. In 1920, the employment per loom was greater in wool than in cotton, since woolen yarn was still largely handspun. A majority of these looms were engaged in the weaving of blankets. It is hard to define 'coarse' blankets in terms of grades of wool, since one of its attributes was precisely lack of standardization. During his journey around Vellore, Francis Buchanan-Hamilton described the coarse blanket in the following terms, "In the neighbouring villages many coarse blankets, or *cumbli*s, were

woven from the wool, which the country produced". When offered for sale, they are as hard as press board; but this quality was given to them by a decoction of the kernels of the tamarind, and is entirely removed by the first washing. There used to be an article of dress universally used by almost all living above the Ghats or passes, and the families of the weavers were readily distinguished as they did not wear any linen. Generally, the poorest quality wool available locally, with a quantity of hair that made it unfit for most other purposes, found its way into a kind of blankets commonly called coarse floor spread (*Durry*), though the precise nature of the material varied between regions. Everywhere, it was a purely utilitarian product and apparently of high wear and tear, so that it always found consumers to whom price mattered more than durability, texture, or softness. The peculiar cost-saving that coarse blankets of the plains did enjoy was derived from the fact that they were woven by the shepherds themselves. Blankets of this kind were as ubiquitous as the sheep from which the wool came, and sold very cheap at weekly markets or post-harvest rural fairs, a number of which took place just before the winter.

From the above, it is clear that shepherds are rearing Coimbatore sheep from ancient time and are

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still continuing. They utilize their produce for manufacturing the blanket using traditional techniques for their use as well as sale. In the paper, detailed information on availability of wool, its quality, processing technique, conversion of wool fibre into yarn, then yarn to blanket, and their quality parameters are highlighted.

Observations

Kalangal village is situated 30 km from Coimbatore city and 3 km from Suler, which is on Coimbatore-Trichy national highway. Of about 500 families living in the village, 100 families are sheep farmers and their women are engaged in woolen blanket manufacturing work traditionally. The Coimbatore sheep are bred and maintained by *Kurumba /Kuruba*, a shepherded community mainly residing at hamlets and villages of Suler and Sultanpet blocks. The villages, where these indigenous sheep are reared included Appanaickanpatti, Kalangal, Pappampatti, Kurumbapalayam, Subbarayampalayam, Kumarapalayam, Arasur, Kannampalayam, Pallapalayam, Peedampalli and Theethipalayam near Thondamuthur, Tippiannur in Periyanaickenpalayam and Perur. The sheep flocks are migratory in nature and they are migrating to Palakad in Kerala, Bhavani, Gopichettipalayam and the border areas of Karnataka, viz Sathyamangalam forest for grazing. They also move towards foothills of Palani. Morphologically, Coimbatore sheep (Fig. 1) are medium sized with compact body, bearing fleece in the head and neck extending up to shoulder/chest or back.

Wool quality

The physical attributes of Coimbatore wool is given in Table 1. The annual greasy fleece yield is about 403 ± 12 gm. The mean scouring and clean wool yield are 89.8 and 81.4 %, respectively. Overall mean fibre diameter of wool fibre is 45.8 ± 202 μ m having 13.6 % hetero, 5.57 % hairy and 28.2 % Kemp fibre. The staple length and crimp of wool are 5.5 ± 0.18 cm and 0.2 turns per cm.

Wool processing

Shearing

The shearing of wool from sheep is carried out once in a year during February to June. The scissors are used for shearing. Before shearing, sheep are washed with water to remove dust and dirt from the fleece. Shearing and sorting are normally done in the grazing areas and the wool is sold to middleman after

Table 1—Physical attributes of Coimbatore sheep wool

Particulars	Quality
Type of Fibre	Open fleece
Colour	Light yellow, black and brown
Staple length	5-6 cm
Fineness	36-75 μ m (mean 45 μ m)
Medullation	47.4
Hetero, %	13.6
Hairy, %	5.6
Kemp, %	28.2
Grease content	nil
Scouring yield	80-90%
Clean wool yield	70-80%

little quantity for local utilization (Fig. 3). The total sheep population in Kalangal village and the adjoining area is about 1.5 Lakhs. Taking average wool yield per sheep 400 gm, the total wool production is around 60,000 kg per year, out of which about 10,000 kg are used by the villagers locally for making blankets and the remaining are sold to wool merchants of Dharmapuri (DT) Tamil Nadu. The wool is then sent to Panipat (Haryana) for processing.

Carding & spinning

A local made machine is used for carding the wool. The machine is fitted with two rollers first one is a hollow cylinder with bent strip of metal to push the wool further, which is transmitted by a conveyor belt, the other one is a carding roller with sharp spike coarse pitch similar to licker-in to open the wool. The machine doesn't contain any provision like doffer or coiler trumpet arrangement for making sliver or tops. It is similar to dusting machine for opening the fleece. The final outcome of the carding machine is well opened and carded loose wool of coarse quality. The wool is carded 2 to 3 times repeatedly to get good result. The artisan women further hand cards the opened wool.

Two types of spinning systems are being used by the woman, i.e. hand spindle (*Tukli* or *Kathir*) and pedal (*Bhageswari*) *charka* (Fig. 2). Both the above systems are primitive and traditionally used for spinning the yarn from Coimbatore wool. The quality of the yarn spun by the above methods is coarse with high twist and is hairy. The production rate is very low as compared to newly developed spinning machines. A woman can spin 0.5 kg of yarn per day on an average using hand spindle and 0.75 kg in the case of pedal *charka*. They work only after taking care of their daily house hold work. The yarn



Fig.-Coimbatore sheep



Fig.2-Spinning by hand-spindle and pedal *Charkha*



Fig. 3 Shearing and sorting of wool



Fig 4-Weaving of blanket

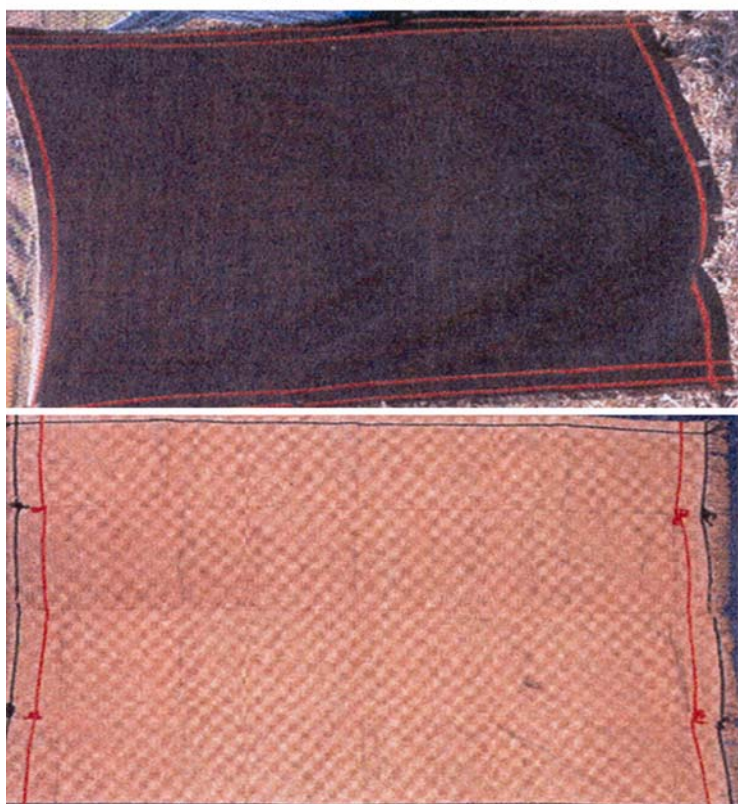


Fig. 5-Blankets produced from Coimbatore sheep wool

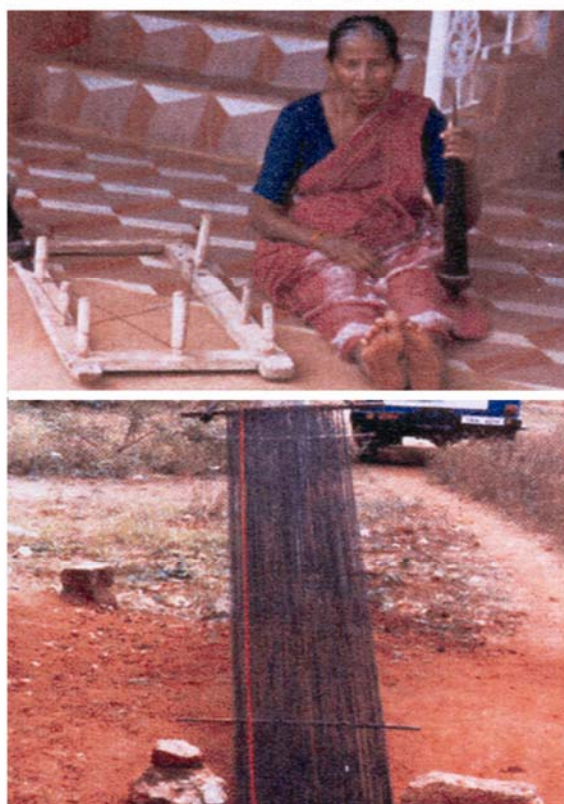


Fig. 6-Hank making and warping of yarn

Table 2—Economics of woolen blanket

Particulars	Cost (Rs)
Wool fibre @ Rs. 30 per kg	75.00
Carding @ Rs. 3 per kg	7.50
Spinning @Rs. 80 per kg	200.00
Winding, sizing and warp making @Rs.20 per kg of yarn	50.00
Weaving @ Rs. 70 per day per woman	280.00
Total	612.50

conversion cost, though not properly estimated, seems to be high due to labour wages as compared to other spinning systems but the whole process is environmentally friendly because it does not create any sound pollution.

Weaving

The spun yarn is wound on a special type wooden frame of unusual size for making hanks. The warp sheet is prepared directly from the hank produced on wooden frame (Fig. 6). Sizing is done only for warp yarn. About 300 gm of wheat flour is used for sizing 2 kg of yarn. For making blankets, primitive loom is used (Fig. 4). Three to four bits of blanket each measuring about 1.5' × 6' separately are woven on primitive loom and then all the four bits are stitched together to make a blanket of 2.5 kg. About four days are required for a woman to weave a full blanket. Blanket is given a border by putting coloured acrylic yarn on border of the blanket (Fig. 5). The economics of blanket weaving is given in the Table 2. They are making the blankets on order from regular customer and for the graziers of their flocks.

Quality of blanket

Although, the cost of the blanket seems to be high because of intensive labour cost of spinning and weaving, however, the product has unique character in durability and warmth. Blanket look rough and harsh in handle initially but later on after use, it becomes soft and attractive in look due to original

yellow colour. Since the blankets are not treated by any chemical, therefore, they are eco-friendly.

Conclusion

The profession adopted by *Kurumba's* in Tamil Nadu is very old and traditional. It is associated with various problems related to the wool quality (coarseness of wool), outdated carding and spinning as well as weaving techniques, which makes product costly and rough to handle. In order to overcome these problems, it is suggested to blend fine quality wool. The carding of wool could be done on modified cotton card to produce uniform sliver. The existing pedal *charka* should be modified suitably in order to get higher production and uniform quality. *Amber charka* can also be tried. The existing looms should be replaced with handlooms so that the production rate will increase and also different product with designs can be made. Training can be given to women about different wet processing like dyeing, finishing (milling, raising, etc.,) so that the product quality can improve. Training could also be given for making product diversification like light blanket, carpet, shawls by blending their wool with other fibres like cotton, polyester, acrylic, etc., can be made with Coimbatore wool. There is no organized market established by the shepherd families so far. Hence, the weavers also face difficulty in marketing their products. The younger generation has found better avenues in learning skill and technical knowledge. They have mostly moved out of the villages. Only few less-skilled youngsters are pursuing this profession engaging other labourers.

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