

Design Resource

## Khadi Weaving - Belgaum, Karnataka

Hand Woven Cotton Fabric

by

Prof. Bibhudutta Baral, Divyadarshan C. S. and  
Lija M. G.

NID Campus, Bengaluru

Source:

<http://www.dsource.in/resource/khadi-weaving-belgaum-karnataka>

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## Introduction

The definition of the word khadi in Sanskrit means cotton fabric, which is generally hand span and hand woven. India is known to be one of the pioneers of khadi, along with Pakistan and Bangladesh. Having a history of about 5000 years, khadi is one of the earliest hand woven fibers, which has a huge popularity in today's modern era. During the ancient times, the fabric was much appreciated for its feature to fight the climate, as it keeps cool in summer and warm in winter that also named as all-weather cloth. Traditionally, khadi is spun on wooden spinning wheel called charka. The hand weaving method interlaces the thread in such a way, that the fiber absorb maximum amount of air and comforts the body like no other fabric.

The fine texture and finish of khadi is much superior when compared to artificially made fiber. Synthetically made fabric tend to cause irritation and allergies in many cases, whereas khadi is very friendly to body and do not cause any problem. The modern generation tends to adopt natural and eco-friendly products thus khadi is one among the best option when it comes to fabric. Production of khadi can be found in every state of India having its own unique feature like style of weaving and the proportion in which the fiber is mixed. Modern designer have blended the khadi is fiber with silk and wool to create more versatile fabric.

Majorly Maharashtra, Gujarat and Andhra Pradesh are the highest contributor to cotton production of India. Belgaum district of Karnataka is well known for varieties of cotton production. Majority of women artisans in Belgaum plays main role in cotton production. Some of the well know cotton varieties of Belgaum are Abadhita, Banny, Suvaha, Varalazmi, Suyodhar, Jayadhar and Renuka. The quality of fiber depends on the length, uniformity, micronaire and strength. Cotton is the only fabric in which no two fibers are identical. Khadi industries in Belgaum provides opportunity and jobs to many of traditional weaver and helps in creating new designs.



Dyed cotton threads.

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Khadi weaving cluster in Hubli.



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Yarns are weighed before dyeing.



Craftsmen displaying the products.



Cotton threads are spun into spindles on cardboard roles.



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Artisan involved in cotton threads dyeing.



The cotton threads are spun onto warp beam.



Traditional weaving loom made of wood.



Hand woven khadi products.

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## Tools and Raw Materials

The main raw materials used for making the khadi products are noolu (local language), which means cotton. A cotton unit is set up in Chitradurga where the cotton threads are purchased and used for weaving. the cotton used for the production are 100% pure. The rocket or flying shuttle is called as Lali (local language), the different varieties of dye colors are used for the process such as red color, nitrate, caustic and sulphate.

Below listed are the tools and raw materials used for the production of Khadi products:

- **Kai-Magga (Handloom):** Used to weave the cloth.
- **Kandik (Bullet):** Used to spin the yarn.
- **Warp Beam:** Use to wound the warped yarn on the beam, which is attached to the loom.
- **Noolu (Yarn):** Are the foremost raw material used for making khadi products.
- **Creel Machine:** Are used for warping the threads.



Cotton thread is the main raw material used for khadi weaving.



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Nitrate powder for dyeing.



Charkha used to convert the yarns into spindles.



The cotton threads are spun in spindles in the spinning machine.



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Color powder for dyeing.



Pedal weaving loom with gear mechanism used for weaving.



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Dye solution used to dye the cotton thread.

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## Making Process

Initially Raw cotton is taken to dyeing process. The process of dyeing includes two methods, hand dyeing and machine dyeing.

**Hand Dyeing** - 20 gram of chemical dye (nitrate, caustic, sulphate) is added in 5litres of water with 10 gram of acid.

**Machine Dyeing** - 35kgs of threads and 600gms of color is added to 100litres of water. The proportion of hand and machine dyeing differs.

To get double color, the threads are tied and covered with tape to required areas. The uncovered areas of threads are dyed.

The added solution is heated for few minutes. And the dyed cotton threads are dried in drying machine for about 15 minutes and taken to spinning process. At the earlier stage wooden charkha was used for spinning but spinning machine is used at present. The cotton threads are wound on plastic cones locally known as Hanji cone and turned into the spindle. The yarns from the spindle are wound on to the bobbins, which are then fixed to the creels for warping. Later it's fixed on to the loom for weaving process. Operating the paddles manually helps the artisan to pass flying shuttle, which interlock the warp threads. Different colors of threads are used to create the designs patterns. The cotton is mixed with 33% of polyester to make smooth, durable and shine. The polyester is added only while preparing trousers and shirt fabric. The final products are sent to Ahmedabad for bleaching.



The area of cotton yarns which doesn't have to be dyed is tied with rubber tape.



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Color is mixed in the container.



Yarns are stamped to dye the thread for better absorption of color.

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The cotton yarns are immersed in the dye solution.



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Yarns are dyed 2 to 3 times to get the darker shade.



Dyed cotton yarns are rinsed in plain water.



Yarns are kept to dry under room temperature.



Cotton yarns are dried under direct sun light.



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Yarns are spun into spindles using charkha.



Spindle is used to insert in the flying shuttle for weaving process.



Yarns are spun into bigger spindles from small spun spindles using a spinning machine.



The spinning machine spins 10 spindles together which saves time.



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The yarns are spun on cardboard rolls, which are locally known as Hanji cones.

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From the spindles, the yarns are spun into warp.



The khadi fabric is weaved on wooden weaving loom.



The cotton threads are spun on weaver's beam which is attached to the loom for weaving.



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The cotton yarn is weaved to desired design.



The breakages are checked and repaired in frequent intervals.



Two pedalled loom.



To create patterns different color threads are inserted in fly shuttle and weaved.



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Weaved part of fabric is rolled to a wooden roll attached to the loom.



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## Products

Khadi products are made using pure cotton, which is suitable for all types of weather. The products have huge demand in local as well as international market. Khadi fabric (pure cotton) costs of Rs80 to Rs 450 per meter. The products get most of the orders from railway department of Belgaum. The products are made using traditional as well contemporary styles. Khadi products make the wearer feel comfortable and cool.

Listed below are some of the products manufactured from Khadi in Belgaum:

- Fabric for shirt, trouser
- Jubba, Pyjama
- Readymade Shirt,
- Chudidhar material
- Lungi
- Hand kerchief
- Towel
- Bed spreads



Pile of hand woven Khadi fabrics.

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Artisan displaying Khadi cotton fabric.



Varieties of patterns are weaved using different color of threads.



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Multi coloured dress materials.



The woven fabric is used to make required design of costumes.



The cotton fabrics are majorly woven for railway departments on orders.

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