

livelihoods

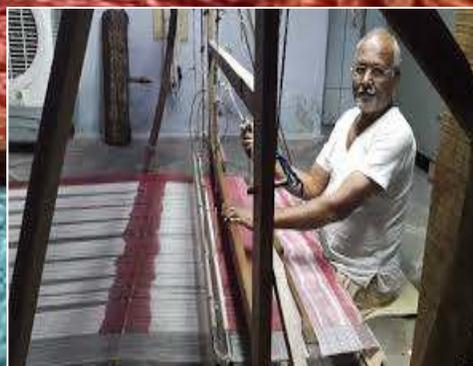
today and tomorrow

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**‘7L’ - Livelihoods
Linkages**

Handloom ‘Naturally’

Today, the Handloom industry of India boasts of a wide range of products across its length and breadth. But what sets our handlooms apart are the coloured designs, motifs made using the age-old methods of natural dyeing! The two trades of handloom weaving and vegetable dyeing are inextricably intertwined. This mutual complimentary nature of both these arts has been one of the greatest strengths of our country’s handloom sector.



Introduction to Handloom

Human beings have transformed from being barbarians, who wore leaves and animal skin into sophisticated people who not only wear clothes for protection but also to quench their aesthetics, style and luxury.

It is not known with certainty, when exactly was weaving first adopted by our ancestors. However, weaving was already known and established about 8000 years before Christ. Coming to Indian handloom history, the fact that 5000 year old Egyptian mummies are found wrapped in Indian silks and muslins of the finest weaves proves the high artistic skills of Indian weavers of the past.

India has been a producer of cotton-cloth of superior quality and repute from time immemorial and is generally regarded, the birthplace of the cotton manufacture. Today, the Handloom industry of India boasts of a wide range of products across its length and breadth. But what sets our handlooms apart is the coloured designs, motifs made using the age-old methods of natural dyeing. The two trades of handloom weaving and vegetable dyeing are intertwined. This mutual complimentary nature of both these arts has been one of the greatest strengths of our country's handloom sector.

Brief History

Weaving is the process of warp and the weft entwining into a fabric according to a design. A loom is termed as 'handloom' when it is actuated by human power. A handloom can be adjusted to weave from a simple plain piece of

fabric to a varied or complex figured or patterned fabric. Adding to the beauty are the dyes that bring out the colours like blues, yellows, pinks of handlooms.

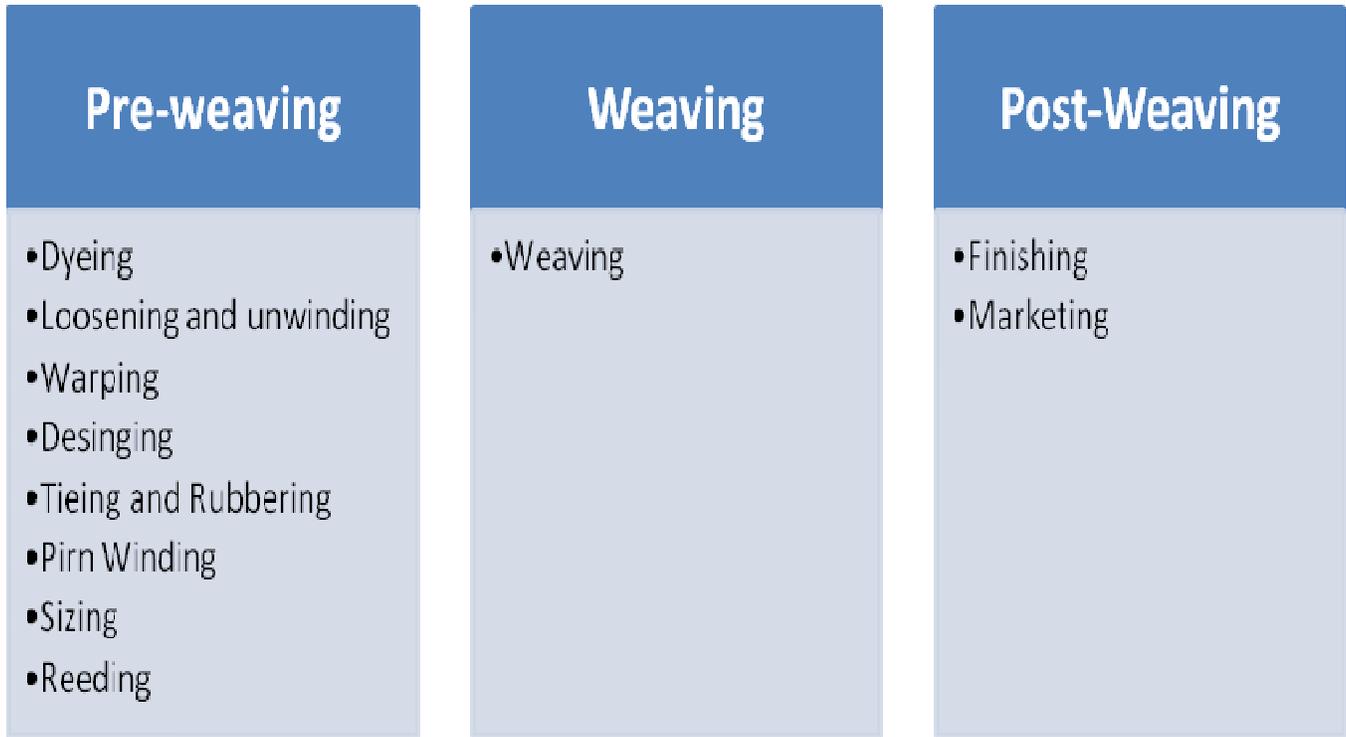
In India, Handloom weaving is accredited to the dumping of mill-made yarn by British, while the spun-mill sprouted handlooms & Khadi have always been part of our country. Handloom and Khadi are like cousins. When a fabric is made entirely by hand, including spinning of yarn, it is called Khadi. When a fabric uses mill spun yarn, but uses hand in all other processes, it is called a handloom fabric. The handloom weaver is common to both Khadi and Handloom.

For ages, the Handloom industry has been source of livelihoods for millions of people in our country. According to Ministry of Handloom & Textiles report, about 10 million people directly depend on the industry for their livelihood, while million more depend upon allied activities. The industry constitutes one of the major sectors employing the largest number of persons, next only to agriculture.



With regard to production, the handloom industry is meeting one-third of the total cloth requirements of the country. In India, the variety of handlooms include - Madras checks from Tamil Nadu; Ikats from Andhra Pradesh, Telangana, and Orissa; Tie and Dye from Gujarat, Telangana and Rajasthan; Brocades from Banaras; Jacquards from Uttar Pradesh; Daccai from West Bengal etc..

Processes of Production



Handloom weaving involves a number of laborious processes. These processes involve pre-weaving, weaving and post-weaving activities. The following displays the different processing operations in weaving.

The steps involved in the cotton fabric production are:

- Spinning the Yarn from raw cotton
- Processing, tying & dyeing the yarn
- Weaving the yarn into fabric

Post processing like tailoring, ironing etc.

Handloom clusters in India

The strength of handloom lies in the ease of introducing new designs, which cannot be replicated by the Power loom sector. The role of the handloom industry in the economic development of the country is large owing to its inherent advantages such as less capital intensive, use of minimal power, eco-friendly quality, the flexibility of small production and adaptability to market requirements. It is a natural productive asset and tradition at cottage-level, which has sustained and grown by transfer of skill from one generation to other. Handloom weaving is largely decentralized and the weavers are mainly from the weaker sections of the society, for most of whom it is the only source of income. However, Handloom weaving saw a considerable decline in some parts of India.

To curb this trend, handloom clusters have been formed across India in recent years. The state wise cluster details are as follows:

Handloom Clusters in India		
S. No	State Name	Cluster Names
1.	Andhra Pradesh	1. Chirala 2. Dharmavaram 3. Mangalagiri 4. Ponduru 5. Pedana 6. Venkatagiri 7. Uppada
2.	Assam	1. Bijoynagar 2. Sualkuchi
3.	Bihar	1. Bhagalpur
4.	Chhattisgarh	1. Champa
5.	Gujarat	1. Patan
6.	Himachal Pradesh	1. Kullu
7.	Jammu & Kashmir	1. Srinagar 2. Kanihama
8.	Jharkhand	1. Bhagaiya
9.	Karnataka	1. Ilkal
10.	Kerala	1. Balarampuram
11.	Madhya Pradesh	1. Maheshwari
12.	Maharashtra	1. Paithani
13.	Manipur	1. Imphal
14.	Odisha	1. Bargarh 2. Sonapur 3. Nuapatna
15.	Rajasthan	1. Kota
16.	Tamil Nadu	1. Kancheepuram
17.	Telangana	1. Pochampally 2. Koyyalagudem 3. Gadwal 4. Narayanpet 5. Puttapaka
18.	Uttar Pradesh	1. Barabanki 2. Varanasi (Banaras) 3. Mubarakpur 4. Bijnore
19.	West Bengal	1. Phulia 2. Bisnupur 3. Burdwan

Dyeing & Its Importance

Natural dye enhances the appeal of the hand-woven cloth manifold. Without dyeing, the variations of the designs in the woven cloth may not be apparent and their uniqueness may be totally lost. The use of natural dyes had been the trademark of most of the handloom varieties in India. Indigo color is one of the oldest natural dyes in India. Moreover, the art of Calico printing is said to have originated here. India's superiority in natural dyes and in

developing excellent color designs and fastness of shades was undisputed till the last century.

But the advent of synthetic dyes with their easy availability, comparative ease of application and the simultaneous availability of mill made yarn and cloth, made the artisans change from vegetable to synthetic dyes and from handloom to mill cloth; without thought to the repercussions it would have on their health, traditional art and the environment. Like many other traditional methods, the art of vegetable dyeing, which had been the handloom sector's USP, slowly faded out due to the lack of vision, flickering only in isolated pockets.

But it is a happy omen that with increasing consciousness to protect our environment and traditions, the natural dyes are slowly coming into their own in our country.

In recent years, along with the art of using natural dyes being widely promoted and practiced, with the help of clusters, the art of handloom weaving is starting to thrive again in various parts of the country such as Paithan, Patola, Pochampally, Ponduru Khadi, Koyalagudem, Gadwal, Kota, Maheshwari, Chanderi, Tangail, Dhuniakali, Cuttack, Sanganer (Baandini), Venkatagiri, etc.. Moreover, the block printing is also seeing a revival in Kalamkari printings and Pedana printings.

Ponduru Khadi

The Ponduru village boasts of weaving the best quality Khadi cloth from a special variety of cotton, namely, Punasa cotton, hill cotton, both White and Red, of very short staple grown in the District. The farmers in the area raise these indigenous varieties of cotton without the use of pesticides /fertilizers and supply the same for weaving Khadi cloth. This cotton is ginned with the help of the jawbone of a specified fish, a unique ginning process. An age-old relationship also exists between the farmers and the weavers in this region.



Pochampally

Pochampally Saree or Pochampally Ikat is a saree made in Bhoodan Pochampally, Yadadri district, Telangana state, India. They are popular for their traditional geometric patterns in Ikat style of dyeing. The intricate geometric designs find their way into the hands of skillful weavers and make it to the market as beautiful sarees, lehengas, and dress materials. The city is popularly known as the silk city of India. Here, weavers' houses contain both semi-open and enclosed spaces for saree weaving.

⇒ **Pochampally Handloom Park:** This Handloom Park is one of the largest parks in Asia. Here, Ikat cotton and silk textiles for apparel and home textiles are mainly produced. They have received training on dyeing cotton with natural dyes and have been supplying material dyed with natural dyes. More than 200 weavers are working in this unit. The Government has a proposal to turn the whole unit into a natural dye unit. They have around 5% of their production in natural dyes.

Koyyalagudem

Koyyalagudem village belongs to Choutuppal mandal, Yadadri district, Telangana. This village is near Pochampally handloom cluster. It is representative of the architectural tradition of this region. The Plan of weavers' houses is developed from the livelihood needs of the inhabitants. During construction, attention is given to details pertaining to functional needs, such as positioning of pits built into the floor of the house for placing of the weaving looms, and lighting requirement for the loom through window/ skylight etc. Koyyalagudem is famous for cotton fabrics such as Bed sheets, cotton sarees, dupattas, dress materials, and home furnishing etc.



Kalamkari Printings

Kalamkari is an ancient style of hand painting done on cotton or silk fabric with a tamarind pen, using natural dyes. The word Kalamkari is derived from a Persian word 'kalam' which means pen and 'kari', meaning craftsmanship. This art involves 23 tedious steps of dyeing, bleaching, hand painting, block printing, starching, cleaning and more. Motifs drawn in Kalamkari, span from flowers, peacocks, and paisleys, to divine characters of Hindu epics like Mahabharata and Ramayana. Nowadays, this art is primarily done to create Kalamkari sarees.

Pipad village

India has centuries' old tradition of use of natural dyes for dyeing and printing application. Rajasthan holds a unique position in natural dyeing and printing. The art of producing natural dyes on textiles is being practiced in many villages by dyers and printers in Rajasthan. Pipad village in Jodhpur district of Rajasthan is famous for natural dyes works on cotton fabric by block printing method.

Vegetable Dyes:

In nature, vegetable dyes are organic. These are derived from various parts of plants. They are the exact opposite of synthetic dyes, which are obtained through chemical reactions in factories or industries. The vegetable dyes extracted from natural sources are organic compounds with complex structures, containing coloring matters in a single dye. The composition of the Indigo colour is blue indigotin. But natural indigo leaves also contain small amounts of indirubis of reddish and yellowish colours thereby, giving colours unmatched by the synthetic indigo. There are some other popular examples of dye yielding plants apart from Indigo such as:

1. Madder or Manjishta - roots yield a rich red dye;
2. Safflower - flower gives yellow or orange dye;
3. Annato tree - the seeds of the fruit yield a bright orange colour;
4. Turmeric - gives a bright yellow colour;
5. Pomegranate - rind of the fruit;
6. Parijatha flower, etc.

While most of these raw materials are widely dispersed and available in various parts of the country, there are some plants, which are only available in limited pockets in some remote parts of the country; e.g. saffron in Kashmir or Oak and Khum in Manipur, Assam, and parts of Northeast India. In these raw materials, some are common to the Ayurveda and Siddha medical systems.

Till recently, there were no clear-cut records to plants which yield the dyes. And each artisan had been following the practice of what their forefathers had been using in the part of the country. Identification of the numerous dye-yielding plants in various parts of the country is a painstaking process. Recently, some attempts have been made in this regard. Some of the researchers have presented a list of 138 dye bearing plants, with their botanical names and also the part of the plant that has to be used and the colour that will be obtained from it. In comparison to the Japanese methods of Indigo cultivation, our methods seem to be primitive as the yields are comparatively low and of poor quality. In the interests of promoting vegetable dyes in India, the tasks of survey and increasing of yields has to be taken up in all seriousness, at the earliest.

Most vegetable dyes are extracted by pulverizing, grinding or soaking the herbs. Some plant materials like Indigo leaves, however, need to be fermented to release the glucosides of the dye. The Indigo plant is, therefore, steeped in specially constructed water tanks, called vats, churned, left to settle, and the sediment collected and dried in the sun to get the Indigo cake. There are two ways of application of natural dye- directly on cloth instead of yarn, Kalamkari, and Block printing. Both of these traditional Indian crafts, which were in oblivion, are slowly coming to enjoy a period of renaissance. These are specialized arts by themselves.

Natural Dyes

Colors derived from nature have certain depth and unique characteristics not found in synthetic chemical colors, however, sophisticated the formulations. Even dyes extracted from the same single plant, with the age of the plant, have variations in colour. It is due to the variable nature of the dye yielding plant product which is influenced by age, climate, soil conditions and the nature of water used, etc. While these may cause difficulty in standardization, these very factors give naturally dyed textiles a special beauty and character and set them apart from synthetic dyes. Tonal variations should not be specified closely. Another major uniqueness of the vegetable dyes is that they are eco-friendly. There is no question of their poisoning the atmosphere or causing pollution.

The synthetic dyes, especially the azodyes and benzidine derivatives, have severe toxic effects, releasing harmful amines, allergens, carcinogenous and other poisonous compounds which may cause allergy & cancer and are detrimental to human health & environment.

The textile industry is one of the most polluting today, with harmful effluents discarded by the chemical dyeing process causing irreparable damage to our ecosystem. Chemical dyes are proving harmful to our health as well, as they contain components that are carcinogenic and toxic to our system causing chemical sensitivity. Some may get headaches, nausea to hyperactivity and behavioural problems in children. The ground water and water sources are also polluted, causing our food to be poisoned.

There is an urgent need to find alternatives in terms of natural dyes which are slowly finding their way back into people's lives. The Natural dyes are extracted from naturally available plant ingredients like indigo, Pomegranate, Myrobalan, Kasimkari, Arecanut juice, Jack wood and other natural materials. Alum, a naturally available mineral, is used as a mordant. The water used for dyeing is safe to be treated in water plants and reused. There are no harmful chemicals used in the entire process, thus, making this environmentally friendly. The naturally dyed clothes are easy on the skin as well.

There are two types of dyeing processes in practice:

Hot Process: This involves steps like scouring, where the yarn is boiled in a huge tank of water to remove impurities, then dipped into a mordant like alum. Then the yarn is dyed in the dye broth according to requirement of the color shade. Finally, it is dried naturally and evenly.

Cold VAT process: In this process, the raw materials are mixed in a pot where they are left for 1-2 days to ferment. The yarn is dipped one or more times, depending on the desired shade. Indigo dye and Areca dye are prepared using this method.

Marketing of vegetable dye products

Naturally dyed products are a little more expensive than a similar product using synthetic dyes. It is purchased for the sake of its aesthetic appeal by the connoisseurs. There is really no competition for market between the natural dye sector and the synthetic dye sector. Both have their own clientele. Even if the natural dyes sector expands as it must, still, there will be a limit to it because of constraints of raw material availability, transportation, region specific varieties, types and designs. The availability of plant sources for natural dyes is limited and cannot meet the demands of modern textile industry. A large volume or weight of the materials may be required to produce a small quantity of the dye. It is suggested that where a raw material is not widely available in the country and is confined to some remote pockets, the dyes derived from there should be used only locally. It would not be economical to transport raw materials over long distances. It should be ensured that a balance be maintained between the products of natural and synthetic dyes. Attention has to be given to ways of bringing down the cost of natural dye products by increasing the yield of the raw materials like for instance indigo, and also improving the marketing.

Naturally dyed fabrics are being sold in the market at a premium price much higher than synthetically dyed fabrics. Due to this, counterfeit textiles are appearing making consumers lose faith. Even traders in this field face problems in identifying genuine natural dyed fabrics. A study was undertaken to explore the possibility of identifying natural dye fabrics at the field level without employing the advanced instruments. Fabrics dyed with different natural dyes were subjected to treatment with solvents at different pH levels to observe the changes for the possibility of using it as a precursor for identification. Experiments were conducted with organic and inorganic solvents and different buffer solutions. Finally, a simple precursor for identification of natural dyed fabrics has been arrived at and patented.

Ahimsa / Peace Silks

The Silk industry in India is over 2500 years old and India is the only country in the world which produces the four different kinds of Silks such as Mulberry, Tassar, Muga and Eri. As amazing as the creation of a pearl inside the oyster is the making of Silk by the tiny Silk worm. Continuous lengths of fine quality lustrous silk fibre, resulting in good weaving, is procured from intact or whole cocoons after boiling, steaming, fumigating and killing the pupae inside.

Eco- Friendly Peace or Ahimsa Silk goods are made from yarn derived from empty and damaged cocoons from which the pupae have emerged as mature moths to breed, regenerate and complete their lifecycle. Shorter and coarser strands of Silk threads, the entangled outer flossy layer of the cocoons, their stems and other jumbled threads normally regarded as silk waste are mostly hand spun, hand woven and recycled into varied products such as scarves, mufflers, stoles, dupattas, shawls, saris and dress materials; besides home furnishings like curtains, cushion covers, bedspreads, throws, mats, runners and rugs in myriad colours and designs.

Contrary to even surfaced and smooth textured regular silks, Ahimsa or Peace silks are normally heavy and thick, with slubs, knots and uneven selvedge. They are available as pure Tassar fabric or are blended with other silks, besides, cotton, wool, linen, viscose and banana fibre for softness, strength, variety and price. They yield to both chemical and vegetable dyeing and printing, besides embroidery beautifully.

[Source: <http://ahundredhands.com/work/ahimsa-peace-silks/>]

Advantages and Disadvantages of Natural Dyes

Advantages: There are many advantages of natural dyes like minimal environmental impact (Biodegradable and disposing of them and do not cause the pollution), renewable (No harm to the environment), color pay-off (It can help soft hue or soothing shade) and safe (no health problems).

Disadvantages: There are some disadvantages of natural dyes such as color pay-off (sometimes this products may fadeout), availability (natural products may not be available entire year like flowers, seeds, and others), sustainability (Producing them require vast areas of land).

Conclusion

From 'Soul' to 'Cult', this long we reached in this journey of Handlooms. When need is prioritized choices need more reflection, when made. The waste we generate from synthetics is equivalent to the generations we borrow from future. It is high time that every step we make detours to cleaner foot prints. Handloom 'Naturally' should become a definite choice for mankind which is not easily possible when not dealt at Policy level. The closest to paradigm shift in Textile sector & industry across, should become the resonance of our very own spirit. Societies, Governments, Community Based Organizations, we should build co-existence in every frame we live. Closer to the natures bed collectively we should stand to sing & display 'naturally' our very own heritage of Symphony -'Hand'looms. ❖

[Source: The role and development of vegetable dyes in Indian handlooms by Ganesh S, <http://nopr.niscair.res.in/handle/123456789/585>]