

Eco-centric dyeing method for Sustainable Fashion

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Abstract: Every year million tons of pollution is created by the fashion industry which cannot recycled. Use of harsh chemicals also exploit natural resources and pollute water. Fashion is one of the area where sustainable process should be adopted to accelerate recycle or up cycle concept. New and upcoming entrepreneurs can adopt such sustainable methods through which resources can be saved. The researcher here is trying to explore the concept of sustainable dyeing and recycling of clothes, to meet our SDG goals.

Keyword – Sustainable, Natural Dye, SDG, recycle, Entrepreneurs

The Consciousness of living sustainable life has motivated each one of us to reuse, rethink and recycle the material in day today life. The sustainable methods which can rejuvenate the old used stuff to new include Dyeing and printing, hammering and Steam are methods for getting natural textures on the cloth. The researcher is exploring new ideas of natural dyeing for old clothes which is a circular fashion concept or reuse the old material, renew them with organic and homemade colors, once fabrics is made, the dying is one of the important step where use of harsh chemicals which is polluting the environment can be avoided (Yadav and Nath 2010). Natural sources of pigments can be extracted from vegetables, iron rust, flowers, roots, leaves and bark has pigments like (carotenoid Chlorophyll and anthocyanins) etc . Natural Dyes are cheapest source, easy to recycle, use less water, will also promote agriculture. Such methods can be adopted by textiles and also by upcoming entrepreneurs it is one of the best ways to promote agriculture, entrepreneurship and sustainable fashion. Natural dyes can be sourced from Plants, Soil, Flowers, Fruits, Root and Vegetables.

S. No	Part of Plant	Dye
1	Root	Turmeric, Madder, Beetroot.
2	Bark	Sandalwood, Purple Wood , Dead Skin of tree.
3	Flower	Harshingar, Hibiscus, marigold, Kusum, Tesu kesar.
4	Leaves	Henna, Indigo, eucalyptus, Tea, Lemon grass.
5	Seeds	Onion seeds, amaranths, Chamomile.
6.	Fruit	Pomegranate, Coffee, Berries, Betel nut.
7.	Vegetable	Red and Purple cabbage, Red Spinach, Green Spinach, Methi leaves.

Organic Mordant - Before dyeing the cloth need to be treated with Mordant (For long-lasting effect of colors on cloth) Natural mordant like (soya milk, phitkari, sea salt) majorly used for the pretreatment of the fabric in organic dyeing. It plays a vital role in fixing dye on fabric. Different mordant methods are adopted before dyeing, after dyeing, together or after dyeing. Depending upon the type of shade we need. The material kept soaked in the mordant for at-least 3 hrs. After that the cloth can be tied with different patterns. During practical approach the researcher tried organic methods because mordant are also made of harsh chemicals which is creating water pollution. That's why use of organic mordant should be promoted.

Organic Color extraction from sources - All basic colors are found in the environment – Blue, red, yellow and green in all the natural pigments. Different fabric needs a little different mordant method to keep the color and its effects lasting. Dyeing the cloth is again a method of rejuvenating the cloth to a new look, Few organically dyed clothes can cure multiple health disorders like stress anxiety and skin issues, insomnia, depression, anxiety or any skin diseases. The property of aloe-vera , haldi , heena and natural vegetables , fruits gives the cloth a new look and also used in healing lifestyle diseases like asthma , psoriasis, migraine etc. (patnaik 2014, Dhingra 2014, Sharma 2014, Mamta and rani 2015). As haldi, aelovera, coffee, lavender etc are rich in medicinal properties also the color the aroma can enrich the cloth in medicinal value can be used to make bed sheet, apron gown for patients etc.

This transformation will also help farmers to produce more agricultural products like roots of madder plant, marigold, beetroot, haldi, harad, cabbage (purple), onion, meethi, palak, coffee etc. Alovera and haldi dyeing is used to prepare Ayurvedic medicinal clothes Mamta and Rani in 2015 elaborated the aspect of ayurveda and its importance as a medicinal or herbal clothes and how it can cure few diseases with SWOT analysis in their research.

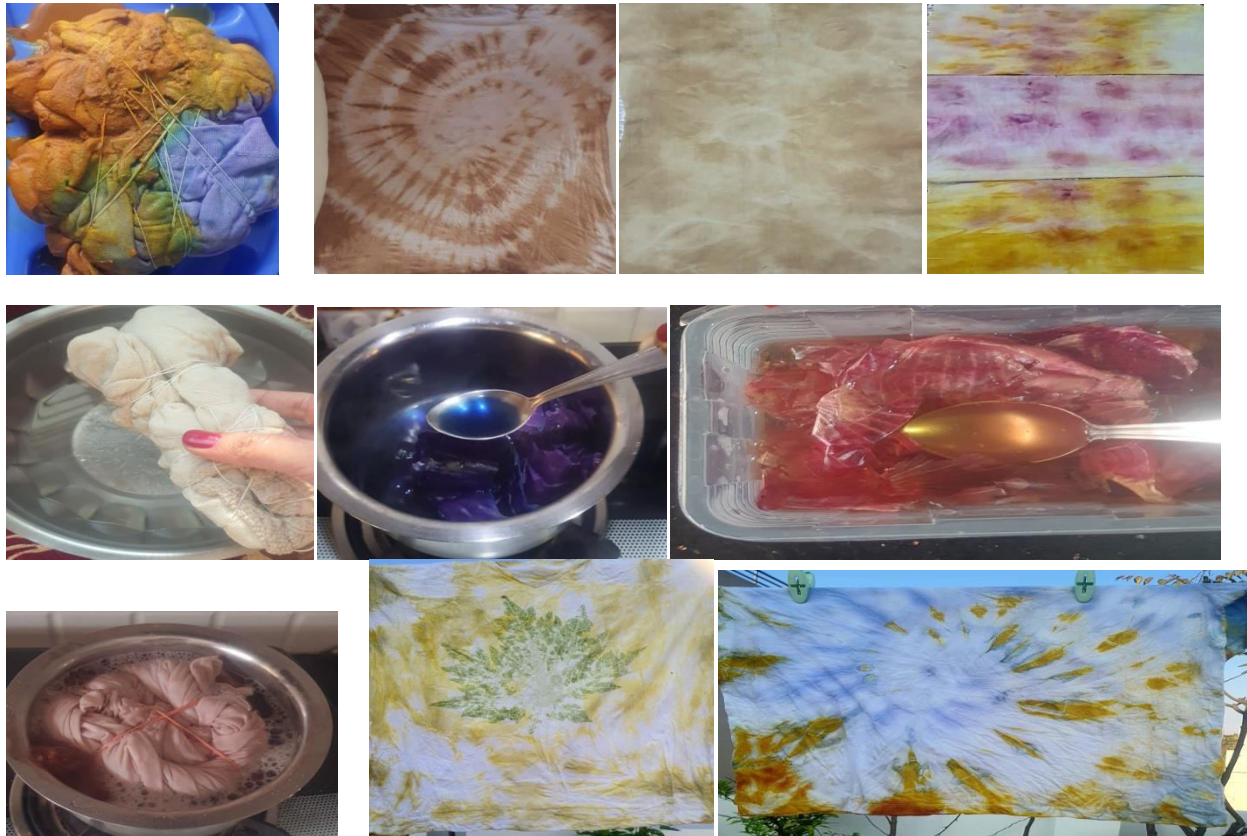
Recycling of cloth: Coffee is another natural dye which gives a different look to old t-shirts, kurta, and any of the fabric to be recycled to new pattern and look. The aroma of Coffee has a property to reduces stress make someone feel relax. Coffee is antimicrobial, antidepressant or sedative properties which is good or insomnia too. The market needs such approach where old cloth can be reused.

The organic Dyeing method has following steps.

1. SCOURING and Extraction of Colors – Cleaning the Fabric before dyeing and color extraction from natural sources.
2. Mordant – Dipping the cloth in natural Mordant for 6 hrs.
3. Dyeing – Making patterns if design is needed, else plain dyeing dipping the fabric into colors.

4. Drying – On directly in sun after drying use heat to make colors stay long on fabric ironing the cloth.

Samples of recycling clothes with natural dye:



(Pics while working on natural color extraction and dyeing)

Summary of Process:

1. Treating cloth before Dyeing with Organic Mordant (Alum, Salt, Soya Milk etc).
2. All natural prints and ecoprint with hammering and steaming method.
3. Coloring and recycling with Marigold which can be taken from temples to recycle, coffee, beetroot, cabbage, aloe vera, palak, meethi, desi haarda, rust from iron, hibiscus, papaya, indigo plant leaves. Sundry the clothes indirectly not in direct sunlight.

Conclusion: Natural Dyeing and recycling of clothes should be promoted by young fashion entrepreneurs. It will not only save environment but also provide a sustainable approach to agriculture and business. Time to rethink to recycle, reuse and save the natural resources. There is lot of future scope to pursue research in this area, entrepreneurs can generate new ideas for business and agriculture. Consumers and producers can plan new strategies to sustain fashion for long time.

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