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Yarns from Unusual Source

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The words, green, organic, eco-friendly have been the buzzword for a long time now. Initially from being the words of few committed sections, today, these words have entered the main stream with fashion houses, manufacturers, designers….embracing it in a big way. Commercial production of these is a reality and it has been adopted with gusto. The earlier limited repertoire of silk, cotton, jute, flax….has today been enlarged to include, yes coffee, lotus, bamboo, soya, corn, maize, kapock, ramie, hemp, sisal, aloe vera, banana fibres, pineapple fibres, kenaf, casein, nettle…. these are the new natural sources of fibres or raw materials for yarn, this list is in no way comprehensive as more sources are being discovered, more research is being done to use the unusual and innovation. And why not? Environment is a multibillion-dollar industry and an innovative breakthrough rakes in millions for the companies concerned. With concern for the environment growing amongst consumers all over the world especially in Europe, the search for newer sources of yarn rises. All the discoveries cannot be said to be original, many of the plant sources were used to create much required products, for garments, for ropes, for construction, the present discoveries have refined the use on a larger scale with better finish and for use in automated plants.

There is no fixed definition of eco-friendly yarns / fibres. It can be broadly defined as one which takes into account the environment. It is friendly to the environment, is made using inputs which are renewable or replenish-able, does not involve the excessive use of chemical pesticides and fertilizers, chemical dyes for bleaching and colouring and if not biodegradable, it can be recycled. The thrust is to make the yarns from renewable sources as against non-renewable sources and that the yarns or fabrics are completely biodegradable / recyclable, another feature is that it uses little of the earth's resources to grow be it water, insecticides / pesticides or fertilisers. More importantly it is the ecological footprint of the fibre / yarn which makes the difference. So apart from being derived from natural, it is grown organically, it could also be extended to include recycled polyester, waste silk sari yarns…..The focus to go beyond fossil fuels to create new textiles. We take a look at a couple of them.

Lotus Fabric

Lotus, the sacred flower revered in religion is now being transformed into fabric. To be precise, it is the stems which are being used to weave fabrics. Touted as spiritual, peace fabric, revered fabric, one that connects with the soul, it is haute and the production is still restricted to small quantities. The production, yes, made by using lotus stems. Lotus stems have been used historically to obtain fibers and then weave into cloth.Lotus stems have been used historically to obtain fibers and then weave into cloth. This has been done by many and one I would like to mention here is AwenDelaval, a Frenchman designer of eco-friendly textiles.

He got inspired by the teaching of the Lotus Sutra of Buddhism and the robes made from lotus fibres worn by Burmese monk. So, in 2003 the 'Samatoa Lotus' was established in the city of Angkor, Cambodia, to revive this long-forgotten art work. (1) Lotus fabric is soft, light and breathable. It is also wrinkle free. It is a eco-friendly fabric without chemicals or toxic products. A waste or stems are transformed into quality fabrics. It is touted as a spiritual fabric. The process of extraction is very tedious. The company also make banana fabric, kapok fabric apart from silk and lotus fabric. Loropiana another company based out of Myanmar is also working on similar lines. The stems are cut and the white fiber like thing rubbed, this is spun into yarn and woven into fabric. It is obtained from the stem. A very beautiful and expensive fabric, the working with which has just begun. Different types of textiles, garments, and accessories were creatively produced for man, female and kids. (3) In these countries, the lotus is harvested and the stem is allowed to remain in the lake. It is left like waste, this method explores the use of converting the waste into yarn and fabric. The fabric is said to be very soft, silky with a natural sheen and smooth. It retails at a price of over $100 a meter!

Hemp

Another fibre, which is gaining in potential, is hemp, the stalks of the *Cannabis sativa* plant. Out of two layers of stalks of the hemp plant, the outer layers are used for making the rope-like bast fibres used for textile purpose. While the inner portion is woody pith is commonly used for fuel, building material and so on. (3) Hemp, which was once very popular in Asian region, is being revived and brought back literally. The biggest producer though is China, which never banned its cultivation, so industrial hemp is being manufactured in China in a big way. What is working for hemp is that some of the biggest retailers like Adidas, Quiksilver, Patagonia amongst others have included it in their range of products. Hemp is being used in outdoor apparel increasingly. The reasons why hemp is being used is that it is stronger than cotton, it is durable, it has anti-microbial and UV resistance, it has high dye absorbability, washable, breathable. Though it is not as soft as other fibers, with time and technology probably that will also be worked out. Hemp is also being blended with other yarns and fibers.

S. Café

Yes coffee, drink it and wear it. Coffee drinkers are increasing across the world and for every coffee made, there is a residue of coffee or ground coffee which is available to be collected. So as per the company in, Taipei, Taiwan, there is "there is never a need to waste time and energy to produce the essential S.Café®raw material. There is an endless possibility where we are able to apply our sustainable material. By making less of an impact on our environment, we are making the world a better place for the next generation."

The conversion of ground waste coffee into yarn started by Jason Chen and his wife Amy, because of a chance remark by Amy telling her husband to put coffee in his clothes to prevent the sweaty smell which came as a result of his love for sports. Intrigued and seeing someone collect waste ground coffee from the outlet where they were having it, he worked on it. As the website says, "S.Café® sustainable technology was developed from four years of research and hard work. By utilizing coffee's natural ability to block odors, this technology is essentially taking wisdom from life experiences." (4) The concept is similar to bamboo yarn making where the pulp is processed to make the yarn. The properties of S.Cafe include odor control, fast drying, UV protection, ice cool touch. Each of these properties comes out when the ground coffee is processed into yarn.The patented technology allows this making the yarn completely available for making any type of fabric or garment.

References

(1) https://samatoa.lotus-flower-fabric.com/
(2) https://ii.loropiana.com/en/our-world/lotus-flower
(3) Martens R., Hemp fibre as a textile resource, Textile Asia 29 (5): 39-50, January 1998
(4) http://www.scafefabrics.com/en-global/home/index

About the Author – Chitra Balasubramaniam writes, collects and experiments with textiles, following her passion with writing on food, travel and heritage. She dabbles with stock investment analysis and research. She also runs a small travel-log – www.visitors2delhi.com .Instragram @visitors2delhi