

# BAMBOO NEWS

Issue No. 121

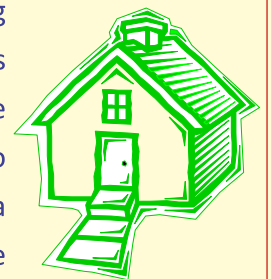
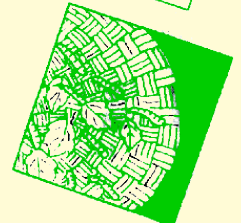
BAMBOO NEWS

June, 2020

## EDITORIAL

This article deals with the application of natural bamboo fiber, which is an experimental approaches to different processes and analysis. The mechanical process practiced in a more innovative way using simple tools to produce prospective natural bamboo fibers. The present methodology and information on some of the successful stepwise process of natural bamboo fiber production by maintaining eco-friendly approaches. Bamboo is well-known for antibacterial and anti-fungal properties. Bamboo fiber is widely preferable all over the world in simple tools, handmade artistic-works, mats and so on. The quality of bamboo fiber in slivers, sticks, and yarn attracts many artists to experiment with their imagination in creativity. This article speaks about the benefits of bamboo fibers in its simplest form.

Bamboo fiber is in great demand for the future textile industry. It plays an important role in small and medium scale industries also in public and private entrepreneurship. It is said that Bamboo fiber is a strong abrasion resistance. Utilisation of Bamboo resources as an alternative to woody and non woody forest resources is gaining importance. Needs more awareness to make use of bamboo fibre as an alternate to other natural and synthetic fibres. Bamboo pulp is the oldest raw material used in paper Industry. More research is needed to find out the variety of uses of bamboo fibre. Bamboo Society of India would like to congratulate the writer for her efforts to find out the use of bamboo fibre in textile industry.



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Published by : 'BAMBOO SOCIETY OF INDIA', 'Vana Vikas' (2nd Floor),  
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## Art and craft applications of natural bamboo fiber, strips and bamboo pulp for paper.

### Introduction

Bamboo, a type of tropical grass, has an extensive rooting system that gives an average of four to six new shoots a year, naturally replenishing itself. It is the most renewable resource on our planet, which also provides abundant usable oxygen, balance between oxygen and carbon dioxide in the atmosphere.

### History and background

Historically in Asia, bamboo was used with the combination of rattans for hand-made craftwork, weaving basketry, making huts, etc., Bamboo pulp 'a fiber material' is the oldest raw material for the paper industry. Bamboo crazes that are ever emerging from centuries to now! 'Going Green' has taken the front seat in almost every industry. Bamboo grass until it separates into thin threads of fiber, which is then spun and dyed for weaving into cloth. Bamboo species used *Dendrocalamus stocksii*, *Dendrocalamus strictus*, *Bambusa balcooa*, *Bambusa tulda*, *Guadua angustifolia*, *Dendrocalamus giganteus*, *Dendrocalamus brandisii*, *Ochlandra*, *Bambusa bambos*, *Bambusa nutans*, *Bambusa balcooa*, *Bambusa vulgaris* etc.

### Relationship between fiber structure and physical properties for its application

Bamboo fibre is hypoallergenic in nature and perfect alternative for allergic reactions to other natural fibres such as wool or hemp (fig.1).

Mechanical process involves bamboo splitting, making bamboo strips which are prepared from bamboo culms. To treat them naturally, they are immersed in water for 3–7 days or alternatively, 10–15 h boiling at 90 °C, the strips are beaten to loosen the fiber from the outer skin "Green exodermis" several repetitions of scrapping with sharp-edged tools, and combing can yield bamboo fibers that are suitable for spinning (Rao & Rao, 2007). Alternatively, a steam explosion chamber can be used on the bamboo strips, rapidly separating the fibrous and non-fibrous parts of the culms (fig. 2).

Globally this is the actual paper in trends used in top branded Books like magazines & subscriptions, history & design, weaving, dyeing & painting, jewellery making, fabric craft, knitting & crochet, felt making, model making, hand spinning, printing etc., (fig. 3)

### Quality and benefits of Bamboo fiber

1. Bamboo fiber is Strong Abrasion Resistance.
2. Bamboo is 100% more absorbent than cotton.
3. Bamboo will retain its structural integrity after multiple items of washing like cotton. It's Machine-washable but it's not Machine-dryable
4. Antibacterial - keeps us odour-free and feeling and smelling fresh
5. Highly sweat absorbent (Pulls moisture from skin for evaporation - moisture-wicking) - keeps you dry
6. Powerfully insulating - keeps you cooler in summer and warmer in winter
7. One of the softest fabrics on the planet you'll love the way it feels
8. Naturally UV protectant - protect yourself from skin cancer
9. Hypoallergenic - natural bamboo does not cause allergic reactions
10. Most eco-friendly fabric on the planet - help save your planet

This beneficial quality of the plant remains in its textile form, killing all bacteria keeping the wearer feeling fresher and odour-free for longer, making the garment healthier and more hygienic. Bamboo possesses an anti-bacteria and bacteriostatic bio-agent called "Bamboo Kun", allowing it to naturally flourish and grow in the wild without the use of pesticides or fertilizers.

Unlike many of the other fabrics, bamboo is extremely breathable. The natural bamboo fiber keeps itself cool in the heat. The cross-section of the bamboo fiber material has micro-gaps hence its better moisture absorbent and ventilation. Bamboo fabric is also anti-static and UV protective as it cuts out 98 percent of harmful UV rays providing the wearer with another beneficial quality from bamboo-made clothing.

## Conclusion

Utilization of bamboo resources as an alternative to woody/ non-woody forest resources is gaining importance. More research needs may be paid on Fiber morphology, fiber fineness, tensile characteristics, etc. of bamboo fiber, as external bamboo fiber contained a higher amount of lignin and solvent extractive; the lower amount of hemicellulose and nano-cellulose than the internal bamboo fiber. Needs awareness to make use of bamboo fibre as an alternate to other natural and synthetic fibres.

## References

1. [https://www.researchgate.net/publication/325848973\\_Production\\_of\\_natural\\_bamboo\\_fibers-1\\_experimental\\_approaches\\_to\\_different\\_processes\\_and\\_analyses](https://www.researchgate.net/publication/325848973_Production_of_natural_bamboo_fibers-1_experimental_approaches_to_different_processes_and_analyses) [accessed Oct 07 2020].
2. <https://www.georgeweil.com/>



Bamboo fiber is similar to the softness of silk. Since the fibers are without chemical treatment, they are naturally smoother and rounder with no sharp spurs to irritate the skin. Different grades of bamboo wool are available and they are categorized based on the texture and used accordingly

Figure 1: Art and craft applications of natural bamboo fiber, Odapoo traditionally used since centuries Kottiyoor temple



Figure 2: Art and craft applications of natural bamboo strips/slivers bamboo flower wases, floral designs made for decorations using simple tools like knife, big sized needle etc., on a base material . The surface can be given glossy look by polishing sand paper. Also can be coated paint or varnished for more durability and make it more colorful.





Nature is functioning as its needed to do!!! Experience with environmental permitting, compliance, source testing and site assessments would be a plus. Excellent presenting skills and technical writing required. COVID-19 is a bad master teaching the world by punishment for all human unlawful acts. It's a greatest challenge to understand and accept the situation. Bamboo industry is thriving to bring us out from this painful pandemic environment and to restart our living being more aesthetic and organized with a slogan "Live and Let Live"

The author is thankful to Mr. Gurupreet Singh for creating an India's largest Bamboo Resources group on what's app media, stay connected stay safe. For more details: guroofarms@gmail.com and 9927091575



Figure 3: The process involved in making Bamboo paper for Art and craft applications made by natural bamboo pulp with most low cost at home. "Go Green" bamboo papers made into a beautiful painting retaining its natural color and texture which enhances the aesthetic beauty of art.

Acknowledgement : Photo source and art work by Unni Krishnan,  
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Published by :

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