

Design Resource

Bamboo Craft - Bhopal, Madhya Pradesh

Making of Bamboo Products

by

Prof. Bibhudutta Baral and Sandhya B.
NID, Bengaluru

Source:

<http://www.dsource.in/resource/bamboo-craft-bhopal-madhya-pradesh>



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2. Tools and Raw Materials
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Introduction

The bamboos are part of Poaceae grass family. The largest members of the grass family are the giant bamboos. Bamboo plants grow from seeds or rhizomes. The rhizome system is very important. As bamboo does not have a central trunk as in trees, they become the foundation. Bamboo rhizomes can be further classified sympodial or monopodial. In general, bamboo species have luxuriant foliage: the plant is one of the top producers of biomass. According to an estimate, bamboo accounts for one-quarter of the biomass in tropical regions and one-fifth in sub-tropical regions. They are very versatile material and are widely used for everyday products in various parts of the countries. Bamboos are fast growing and are a low cost material that is strong and durable. It can be used for various purposes such as house building to functional and decorative objects. Chairs, stools, hats, baskets, cups, bowls, chopsticks, musical instruments and more are some of the bamboo products that are often seen. It plays a role for erosion control, riverbank protection, landslide prevention and land rehabilitation. With the treatment of bamboo it forms to a light, remarkably durable and hard wood that can be used for constructing houses, furniture, roofing and floorings. Bamboo is a material that provides several job opportunities as with a small capital investments the products can be achieved. Hence there are many cooperatives that have indulged in training in making bamboo products especially in the villages. Bamboo products essentially need a good design that doesn't only focus on aesthetic but also on the way it is made, durability and marketability using simple tools to make them. Bamboo can be bent to curve and round shapes without breaking, as it is flexible. They are smooth so unlike wood, they don't need to be stripped for making craftwork. The canes can be split according to the craft requirements. The raw materials are available in plenty. Northeastern parts mostly Assam has probably the maximum resources for the bamboo industry in India comparing with the foreign countries.

Bamboo as natural raw material do not cause any harm to the user and are eco-friendly. Needs very less maintenance and is durable. The cost is low and also affordable. This makes the products to be designed with ease and little effort. The thoughts of the artisans could be easily made to achieve to the fine products. The bamboos are treated before beginning to use. The bamboos are cut and dried to remove the moisture content. After this the bamboo is treated with termite resistance. Many simple and heavy tools are used to cut the bamboo to the required sizes before beginning with work. As there is less wastage of raw materials it is going to be an added advantage to the reduction of the cost of production.

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Mr. Asit kumar saha, technical consultant of jute service extension center. Skilled artisan cutting bamboo in required length.



Mr. Asit kumar saha, technical consultant of jute service extension center.

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Bamboos are bought from forest department.



Bamboos are given treatment in water with salt, borax, mankozeb for 2 hours.



Katang bamboo is one of the species used to make furnitures.

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Tools and Raw Materials

The tools that are required for the Bamboo craft:

- **Bamboo** - Bamboo is used as the raw material.
- **Measuring Tape** - Measuring tape is used to mark the appropriate measurements.
- **Saw** - Hand saw is used to cut the bamboo.
- **Hammer** - Hammer is used to nail the bamboo.
- **Chisel** - Chisel is used to create hollows in the bamboo.
- **Nails** - Nails are used to lock and support consecutive bamboo.
- **Glue** - Thick glue is used to fix cut bamboo together.
- **Bamboo Sawing Machine** - This machine helps to cut bamboo to required sizes.
- **Angle Grinder** - This tool is used to treat the surface.
- **Expansive Bits** - This tool is used to drill holes.
- **Lacquer** - Is used to give a glossy and protective layer.
- **Brush** - Brush is used to apply the lacquer.

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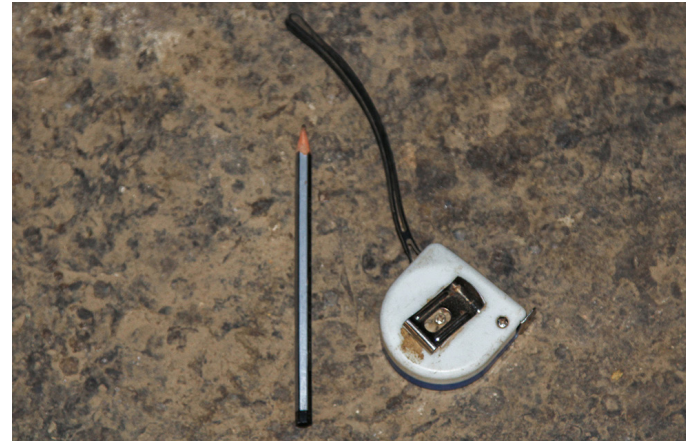
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Measuring tape and pencil is used to do marking on bamboo in required length.



Peace's of bamboo is attached together using adhesive.



Hammer, Chesil, nail plier and hawk saw blade are used to cut the bamboo to required shape and size.

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Bamboo is one of the main raw material to make different products.



Buffering machine used to smoothen the surface of the bamboo.



Different sizes of nails are fixed in bamboo to make it strong.

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Drilling machine is used to make holes on bamboo.



Varnish is applied on bamboo to give a glossy finish.

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Making Process

Bamboo is a very important product that is taken as livelihood option for people who are solely forest-dependent in India. It is an important forest produce and takes a very significant stance in economic life of rural Madhya Pradesh. The right kind of Bamboo that is needed to make furniture is harvested. The gathered bamboo is treated to remove all the moisture content. The bamboo is dried well to make it durable. Depending on the orders of the clients the products are made mostly, the sizes of bamboo as required for to accomplish the product is cut and soaked in water and boiled with natural medicines. This makes the bamboo unaffected from the contamination from pests, termite and the external triggers. The bamboo is completely dried before use. The bamboo is segregated initially according to the products that are going to be made. They are cut to the required sizes with the help of bamboo sawing machine. The cut bamboo sticks are arranged to the products that have to be made. The products are always made depending on the clients' orders, in case of a stool – bamboo is cut respectively to four sets to make the legs and eight sets of smaller lengths to connect the legs horizontally to get a firm hold of the four legs of the stool. A stool is something similar to that of the chair but doesn't hold a backrest. It is a seat for single person without any armrest or backrest. Variety of stools with three, four and five legs can also be made as per the design requirements. The four set of bamboo sticks are drilled with hole and made hollow at the ends to fix another set of bamboo sticks horizontally. The edges of the smaller length bamboo are sharpened to fit into the hollow area made on the longer one. Four sets on top and four sets below hold the legs firm to make a stool. The lock sections of the stool are also nailed to ensure the toughness. A seat is placed on top and this brings the clear form a stool. The stool can be further added with accessories and polished with lacquer or wood polish to give a glossy effect that also acts as the protective layer. Variety of attractive and creative stools can also be made out of bamboo, as they are flexible and supports in achieving the designs.

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Flow Chart:

1. The bamboo is dried well to make it durable.

2. The bamboo is cut to the required sizes.

3. To make a stool, four set of long and shorter bamboo sticks are cut.

4. The ends of bamboo sticks of longer lengths are drilled with holes.

5. The edges of shorter set of bamboo sticks are made sharp to fix it with the longer ones.

6. Another four set of shorter bamboo sticks are cut to fix on the top edges of longer bamboo.

7. The edges of shorter set of bamboo sticks are made sharp to fix it with the longer ones on top.

8. The seat that is a small square ply wood sheet is nailed to complete the stool .

9. The stool is polished with lacquer or wood polish to add a protective layer and get that glossy effect.

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The bamboo is cut into required size using a saw machine.



The nodes are removed from bamboo.



Using buffering machine the bamboo is smoothen on the surface.

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Bamboos are assembled together to make frame.



The holes are opened bigger to attach another piece of bamboo.

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Holes are made on frame to using drilling machine.



Required length is marked on piece of bamboo.



The bamboo is cut at an angle to make a holder.

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Fevicol is applied on the holder of the bamboo.



The bamboos are assembled together.



Nail is fixed near the joints of bamboo to hold it strong.

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Varnish is applied all over the product.



The product is kept for drying.

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Products

The products of bamboo are numerous. They are used in making walking sticks, tent-poles, and hand fans, domestic and agricultural implements, variety of stools and chairs (furniture items) and more. The price starts from INR 300 and goes on depending on the product that is made. The products can be produced on a cottage and small-scale basis with small machineries that provide job opportunities to many as well.



Semi-finished single sitting chair.



Bamboo furniture's are sold only in exhibitions all over India.



Beautifully made stand used for flower decoration.

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Video



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Contact Details

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