

JUTE

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Jute plants (*Corchorusolitorius* and *Corchoruscapsularis*)

Jute is a long, soft, shiny vegetable fiber that can be spun into coarse, strong threads. It is produced from plants in the genus *Corchorus*, which was once classified with the family Tiliaceae, more recently with Malvaceae, and has now been reclassified as belonging to the family Sparrmanniaceae. "Jute" is the name of the plant or fiber that is used to make burlap, Hessian or gunny cloth.

Jute is one of the most affordable natural fibers and is second only to cotton in amount produced and variety of uses of vegetable fibers. Jute fibers are composed primarily of the plant materials cellulose and lignin. It falls into the bast fiber category (fiber collected from bast or skin of the plant) along

with kenaf, industrial hemp, flax (linen), ramie, etc. The industrial term for jute fiber is raw jute. The fibers are off-white to brown, and 1–4 metres (3–13 feet) long. Jute is also called "the golden fiber" for its color and high cash value.

Cultivation

Jute needs a plain alluvial soil and standing water. The suitable climate for growing jute (warm and wet) is offered by the monsoon climate, during the monsoon season. Temperatures from 20°C to 40°C and relative humidity of 70%–80% are favourable for successful cultivation. Jute requires 5–8 cm of rainfall weekly, and more during the sowing time.

White jute (*Corchorus capsularis*)

Historical documents (including *Ain-e-Akbari* by AbulFazal in 1590) state that the poor villagers of India used to wear clothes made of jute. Simple handlooms and hand spinning wheels were used by the weavers, who used to spin cotton yarns as well. History also states that Indians, especially Bengalis, used ropes and twines made of white jute from ancient times for household and other uses. It is highly functional in carrying grains or other agricultural products.



Jute Fiber

Main article: [Jute trade](#)

Jute is a rain-fed crop with little need for fertilizer or pesticides, in contrast to cotton's heavy requirements. Production is concentrated mostly in India's state of Assam, Bihar, West Bengal^[3] and Bangladesh. The jute fiber comes from the stem and ribbon (outer skin) of the jute plant. The fibers are first extracted by retting. The retting process consists of bundling jute stems together and

immersing them in slow running water. There are two types of retting: stem and ribbon. After the retting process, stripping begins; women and children usually do this job. In the stripping process, non-fibrous matter is scraped off, then the workers dig in and grab the fibers from within the jute stem.^[4] India is the world's largest producer of jute,^[5] but imported approximately 162,000 tonnes^[6] of raw fiber and 175,000 tonnes^[7] of jute products in 2011. India, Pakistan, and China import significant quantities of jute fiber and products from Bangladesh, as does the United Kingdom, Japan, United States, France, Spain, Côte d'Ivoire, Germany and Brazil.



Jute fabric



Coffee sacks made of jute.

Jute matting being used to prevent flood erosion while natural vegetation becomes established. For this purpose, a natural and biodegradable fiber is essential.

Jute is the second most important^[why?] vegetable fiber after cotton. Jute is used chiefly to make cloth for wrapping bales of raw cotton, and to make sacks and coarse cloth. The fibers are also woven into curtains, chaircoverings, carpets, area rugs, hessian cloth, and backing for linoleum.

While jute is being replaced by synthetic materials in many of these uses, some uses take advantage of jute's biodegradable nature, where synthetics would be unsuitable. Examples of such uses include containers for planting young trees, which can be planted directly with the container without disturbing the roots, and land restoration where jute cloth prevents erosion occurring while natural vegetation becomes established.

Jute is regularly used in the production of clothes, particularly sweaters and underwear. Its soft fabric structure is known to be very comfortable to the person wearing it and therefore, popularity for jute clothes has increased significantly over the last decade.^[10]

The fibers are used alone or blended with other types of fiber to make twine and rope. Jute butts, the coarse ends of the plants, are used to make inexpensive cloth. Conversely, very fine threads of jute can be separated out and made into imitation silk. As jute fibers are also being used to make pulp and paper, and with increasing concern over forest destruction for the wood pulp used to make most paper, the importance of jute for this purpose may

increase. Jute has a long history of use in the sackings, carpets, wrapping fabrics (cotton bale), and construction fabric manufacturing industry.

Traditionally jute was used in traditional textile machineries as textile fibers having cellulose (vegetable fiber content) and lignin (wood fiber content). But, the major breakthrough came when the automobile, pulp and paper, and the furniture and bedding industries started to use jute and its allied fibers with their non-woven and composite technology to manufacture nonwovens, technical textiles, and composites. Therefore, jute has changed its textile fiber outlook and steadily heading towards its newer identity, i.e., wood fiber. As a textile fiber, jute has reached its peak from where there is no hope of progress, but as a wood fiber jute has many promising features.^[11]

Jute is used in the manufacture of a number of fabrics such as Hessian cloth, sacking, scrim, carpet backing cloth (CBC), and canvas. Hessian, lighter than sacking, is used for bags, wrappers, wall-coverings, upholstery, and home furnishings. Sacking, a fabric made of heavy jute fibers, has its use in the name. CBC made of jute comes in two types. Primary CBC provides a tufting surface, while secondary CBC is bonded onto the primary backing for an overlay. Jute packaging is used as an eco-friendly substitute.

Diversified jute products are becoming more and more valuable to the consumer today. Among these are espadrilles, soft sweaters and cardigans, floor coverings, home textiles, high performance technical textiles, Geotextiles, composites, and more.

Jute floor coverings consist of woven and tufted and piled carpets. Jute Mats and mattings with 5 / 6 mts width and of continuous length are easily being woven in Southern parts of India, in solid and fancy shades, and in different weaves like, Boucle, Panama, Herringbone, etc. Jute Mats & Rugs are made both through Powerloom & Handloom, in large volume from Kerala, India. The traditional Satranji mat is becoming very popular in home décor. Jute non-wovens and composites can be used for underlay, linoleum substrate, and more.

Jute has many advantages as a home textile, either replacing cotton or blending with it. It is a strong, durable, color and light-fast fiber. Its UV protection, sound and heat insulation, low thermal conduction and anti-static properties make it a wise choice in home décor. Also, fabrics made of jute fibers are carbon-dioxide

neutral and naturally decomposable. These properties are also why jute can be used in high performance technical textiles.^[4]

Moreover, jute can be grown in 4–6 months with a huge amount of cellulose being produced from the jute hurd (inner woody core or parenchyma of the jute stem) that can meet most of the wood needs of the world. Jute is the major crop among others that is able to protect deforestation by industrialisation.

Thus, jute is the most environment-friendly fiber starting from the seed to expired fiber, as the expired fibers can be recycled more than once.

Jute is also used to make ghillie suits, which are used as camouflage and resemble grasses or brush.

Other



Jute stalks are being dehydrated under the sun, later they will be used as fuel.

Diversified byproducts from jute can be used in cosmetics, medicine, paints, and other products.

Features



Picture of cutting lower part of the long jute fiber. The lower part is hard fiber, which is called jute cuttings in Bangladesh and India (commonly called jute butts or jute tops elsewhere). Jute cuttings are lower in quality, but have commercial value for the paper, carded yarn, and other fiber processing industries. Jute fibers are kept in bundles in the background in a warehouse in