

Hibiscus cannabinus

[Synonyms : *Abelmoschus verrucosus*, *Furcaria cavanillesii*, *Hibiscus unidens*, *Hibiscus verrucosus*, *Ketmia glandulosa*]

KENAF (English, Danish, Dutch, German, Italian) is an annual (less often a short-lived perennial). Of debated origin but probably native to tropical Africa (including Zimbabwe), and to the Middle East, India or the East Indies, it has dark purple to black-centred, (rarely pale purple) pale yellow flowers.

It is also known as *Ambari* (German), Ambari hemp, Bastard-jute, Bimli, Bimli jute, Bimlipatum, Bimlipatum jute, Bombay hemp, Brown Indian-hemp, *Cáñamo de gambo* (Spanish), *Cáñamo de la India* (Spanish), *Cáñamo Rosella* (Spanish), *Canapa di Bombay* (Italian), *Canapa rosella* (Italian), *Cânhamo-brasileiro* (Brazilian, Portuguese), *Cânhamo rosella* (Portuguese), *Chanvre de Bombay* (French), *Chanvre de Gambo* (French), *Chanvre de Guinée* (French), *Chanvre de roselle* (French), *Chanvre du Deccan* (French), *Czyli kenaf* (Polish), *Da min jin* (Chinese), Deccan hemp, *Dekkan-Hanf* (German), *Gambohanf* (German), Gambo hemp, Gombo hemp, *Gongura* (Telugu), Guinea hemp, *Hamp* (Danish), *Hanfeibisch* (German), Hemp hibiscus, Hibiscus hemp, *Hibiskus* (Turkish), *Ibisco* (Italian), Indian hemp, Java jute, *Javajute* (Danish, Dutch, German), *Jiljil* (Arabic), *Juta de Java* (Portuguese), *Juta del Siam* (Italian), *Juta do Sião* (Portuguese), *Jute*, *Jute de Java* (French), *Jute de Siam* (French), *Jute di giava* (Italian), *Kénaf* (French), *Kenafu* (Japanese), *Ketmia konopiwata* (Polish), *Ketmie à feuilles de chanvre* (Belgian, French), *Kudram* (Nepalese), *Kunjar* (Nepalese), *Maarangii* (Nepalese), *Mesta*, *Mestapat* (Bengali), *Nali* (Sanskrit), *Papoula de Sao Francisco* (Brazilian, Portuguese), *Patsan* (Hindi, Nepalese), *Pavona encendida* (Spanish), *Paw dai* (Thai), *Predivni oslez* (Croatian), *Pulichai* (Tamil), *Rosellahamp* (Danish), *Rosellahanf* (German), Rosella hemp, *Rosella hennep* (Dutch), Roselle (Dutch, English, French, German), *Rosellehamp* (Danish), *Rostmályva* (Hungarian), Siam jute, *Siamjute* (Danish, Dutch, German), *Stokroos* (Afrikaans), Thorny mallow, *Til* (Arabic), Wild stockrose, *Yute de Java* (Spanish), and *Yute de Siam* (Spanish).

Oil is extracted from the seeds, and the bark and stems yield a strong fibre.

Warning – stems should be cut carefully (not broken) as they are covered with minute spikes that can tear the skin on the hands.

Cannabinus is derived from the genus name *Cannabis* meaning ‘like hemp (*Cannabis sativa*)’. Kenaf has been cultivated for centuries on a small scale in tropical Africa (perhaps since 4000 BC), and in India and south-eastern Europe as well.

In tropical Africa and in India kenaf leaves have been eaten for thousands of years by both animals and humans – and the seeds have long been believed to hold aphrodisiacal qualities.

Young leaves have been included in soups and stews as flavouring, and the seeds have been ground for flour or roasted. They have often been included in a diet to increase weight (for cultural or health reasons). The root has also provided food and the seed oil if refined is edible too. This latter has been used as both a salad and a cooking oil.

Africans have used the untreated seed oil for lighting and as a body rub. In modern times the oil has proved to be a suitable lubricant for machinery too – and has also provided an

ingredient in the manufacture of soap, paints, varnishes and linoleum, as well of course as its long-standing use for lighting.

In Africa stem soot has provided a black pigment .

Cattle have been fed on the seed cake left after the oil has been extracted.

Fibre from stems and bark (jute-like, *Corchorus capsularis*, but coarser and stronger) has been used for making cordage for as long as the plant has provided food – as well as for making rope, twine, matting and fishing nets..

Probably the most dramatic modern applications do come from its fibre. During the 2nd World War in the 1940s jute (*Corchorus capsularis*) became in short supply and this helped to turn attention towards kenaf as an alternative. At that time the deficit encouraged some research in the southern United States, and central America, as well as eastern Asia, and Russia into its production and useage – but in the developed world the plant was destined to cloak its practicable qualities for another 40-50 years. Although in most regions where kenaf is processed for fibre today age-old labour intensive practices are still followed, in the United States since the early 1980s these methods were starting to become entirely mechanized – with the added advantage of a dramatic decrease in environmental damage. Commercially the future use of kenaf as an annually renewable source of fibre for a variety of end uses such as pulp for onward use (paper or plastics) is now receiving considerable attention in the West particularly in the USA.

It will be apparent already that kenaf had been flirted with in the United States for some decades before any constructive research began. Then in the 1960s it emerged top of a list of 500 plant species examined for their pulp and paper-making qualities. Despite low wood and paper prices from 1960 to 1975 the research and development needed to present kenaf as a fibre source for paper continued. Although this led to some initial practicable commercial newsprint runs from 1977 to 1981 (notably that on 8th August 1977 for the Illinois *Peoria Journal Star*) it became apparent that resolution of agricultural constraints had not kept up with developments further down the line. These farming constraints included the absence of a reliable seed supply on a commercial scale and in similar context practicable methods for harvesting, transportation and storage of the crop. By the end of the 1980s all these problems had basically been overcome – and kenaf as a viable newsprint source was ready to take off (a 90 ton-per-day newsprint mill was even in the planning stages). But it now faced a new hurdle. From 1990 to 1993 the paper industry suffered from over capacity – and non-wood fibre sources could not compete with the much lower prices then being asked for paper made from traditional wood sources. By then however three fibre separation mills had been established and their concentration on newsprint had to fall by the wayside. Diversification was very much the name of the game – and led to the production of higher quality grades of kenaf paper on the one hand and the use of the fibre in oil, in chemical absorbents, and as animal bedding. Research progressed as it still does today and further uses for the fibre began to emerge such as parts for car interiors eg. dashboards, ‘instant lawn’ mats, and carpet backing material. In conjunction with consideration of the fibre of course researchers have also addressed the possible uses for other parts of the plant and one particularly important factor appears to be emerging. In addition to the commercial desirability apparent for the fibre, the leaves may prove to be a valuable and viable forage crop.

Medicinally, kenaf leaves have been used in Africa to treat worms, stem peelings have provided treatments for fatigue and anaemia, and a leaf infusion has been taken for coughs. Then in India the leaves have offered a remedy for dysentery, and blood and throat disorders. Externally the seeds have been applied in poultices to bruises, as well as

for aches and pains. The Indians have also prescribed the flower juice mixed with sugar and black pepper (*Piper nigrum*) as an antidote for stomach upsets.