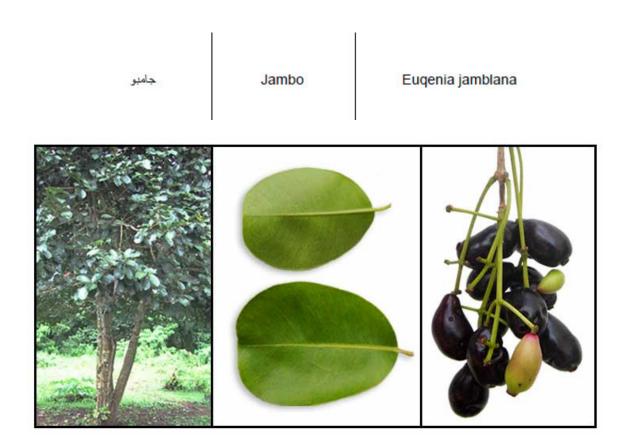
# T13 Jambo

(Jambul - Jamun – Jamblang – Duhat plum - Syzýgium jambolána - Jambolan, Java plum, Black plum, Damson plum, Jamboo, Malabar plum, Portuguese plum)



**Important!** Do not use herbs for medicinal purposes without consulting your medical doctor. Herbs have medicinal qualities and can react with other medication

Source: <a href="http://findmeacure.com/2007/04/07/jambul/">http://findmeacure.com/2007/04/07/jambul/</a>

A tree from 20 to 30 feet high, with long narrow peach-like leaves; flowers a greeny-yellow colour, in terminal bunches, blooming in July; the fruit about the size of a hen's egg, varying from white to red and rose colour, in scent and taste like a ripe apricot.

It was cultivated in England by Miller in 1768.

The bark is dense and hard, pinky or reddy-brown colour, with a thick corky substance, whitish grey mottled, often ridged; the inner surface has a silky lustre; freshly fractured it shows a colour varying from fawn to a pinky purple, abruptly shortly fibrous; seeds are oval, 1/2 inch long and 1/5 inch round, hard, heavy, blacky-grey colour, almost tasteless.

- **Constituents:** Essential oil, chlorophyll, fat, resin, gallic and tannic acids, albumen and in their seed ellagic acid.
- *Jambul contains:* phenols (methylxanthoxylin), tannins, alkaloid (jambosine), triterpenoids, volatile oil.
- **Medicinal Action and Uses:** In India Jambul has long been used as a carminative in diarrhoea; stomachic and astringent.

The fresh seeds have been found most effective in diabetes, as they quickly reduce sugar in the urine; also very beneficial in glycosuria.

No poisoning or other harmful effects have been reported from its use.

#### HOW MUCH TO TAKE

Herbal infusion: the herbal infusion of jambul can be prepared steeping one to two teaspoonfuls of the crushed seeds in a cup of boiling water.

The herb must be allowed to infuse into the water for ten to fifteen minutes.

The strained and cooled infusion can be drunk thrice daily as a remedy for various illnesses.

Herbal tincture: the herbal jambul tincture can be taken at doses of one to four ml thrice daily as a treatment for a variety of illnesses.

#### COLLECTION AND HARVESTING

Harvest of jambul fruits that is grown in India, Australia and other Asian countries, is carried out late in the summer or early in the fall.

### Origin and Distribution:

The jambul fruit has been cultivated in the Indo-Malaysian region for a long time. It is considered to be native of India or further east, but is now found in all tropical regions and grows abundantly during the rainy season.

It is a common tree, found wild or cultivated in most parts of India.



Jambul or Jamun or Jamblang (<u>Syzgium cumini</u>) is an evergreen tropical tree in the flowering plant family Myrtaceae, native to India, Pakistan and Indonesia.

It is also grown in other areas of southern Asia including Myanmar and Afghanistan. The tree was also introduced to Florida, USA in 1911 by the USDA, and is also now commonly planted in Suriname.

In Brazil, where it was introduced from India during Portuguese colonization, it has dispersed spontaneously in the wild in some places, as its fruits are eagerly sought by various native birds such as thrushes, tanagers and the Great Kiskadee.

The various names for this fruit are (in Java) plum, jambul, jamun, jaman, black plum, faux pistachier, Indian blackberry, jambol, doowet, jambolan, jambolão, nava pazham (Tamil) and pring (Khmer).

Scientific synonyms include Syzygium jambolanum, Eugenia cumini and Eugenia jambolana.

A fairly fast growing species, it can reach heights of up to 30 m and can live more than 100 years. Its dense foliage provides shade and is grown just for its ornamental value.

The wood is strong and is water resistant.

Because of this it is used in railway sleepers and to install motors in wells.

It is sometimes used to make cheap furniture and village dwellings though it is relatively hard to work on.

The Jamun tree starts flowering in March-April.



The fragrant flowers of Jamun are small, nearly 5 mm in diameter.

This is followed by the fruit which appears in May-June and resembles a large berry. The berry is oblong, ovoid, green when just appearing, pink when attaining near maturity and shining crimson black when fully ripe.



Another variety comes in white and is said to have medicinal properties.

Jamun fruit is a mixture of sweet, slightly sub acid and astringent flavour that stands out even after eaten since it turns the tongue into purple color.

The fruit is universally accepted to be very good for medicinal purposes, especially diabetics.

The seed is also used in various alternative healing systems like **Ayurveda**, **Unani** and **Chinese medicine for digestive ailments**.

The leaves and bark are used for controlling blood pressure and gingivitis.

### Wine and vinegar are also made from the fruit.

**Fruits:** The jambul fruit is a well-known common fruit. It has two varieties. The big one is oval in shape and is commonly called as Suva-jamun.



The small one is round in shape and is commonly called as Kutta-jamun. The bigger variety is sweeter than the smaller one.

The fruit is a juicy berry with a single stone. It is black outside and violet inside; has a sourish-sweet pulp and greenish yellow seed.

### Natural Benefits and Curative Properties

### Diabetes

The jambul fruit is regarded in traditional medicine as a specific against diabetes because of its effect on the pancreas.

The fruit as such, the seeds and fruit juice are all useful in the treatment of this disease. The seeds contain a glucose 'Jamboline' which is believed to have the power to check the pathological conversion of starch into sugar in cases of increased production of glucose.

They are dried and powdered. This powder in doses of three grams should be given three or four times a day mixed in water. It reduces the quantity of sugar in urine and allays the unquenchable thirst.

In Ayurveda, the inner bark of the jambul tree is also used in the treatment of diabetes. The bark is dried and burnt, which produces an ash of white color. This ash should be pestled in the mortar, strained and bottled.

The diabetic patient should be given 65 mg. of this ash on an empty stomach with water in the morning and 135 mg. each time in the afternoon and in the evening, an hour after meals, if the specific gravity of the urine is 1.02 to 1.03.

If the specific gravity ranges between 1.035 and 1.055, the ash should be given thrice daily in the quantity of about 2 gm. at a time.'

### Polyuria

The powder of the seeds is valuable in Polyuria or production of excess urine. It should be taken in dose of I gm. in the morning and evening.

### Diarrhoea and Dysentery

Powder of the seed is an effective remedy for diarrhea and dysentery. About 5 to 10 gm. of this powder should be taken with butter-milk in these conditions.

An infusion of the tender leaves, which contain a high concentration of gallic and tannic acid is also given as a medicine in diarrhea and dysentery.

This infusion, prepared from 30 or 60 gm. of leaves, should be given twice or thrice daily.

A decoction of the bark taken with honey is also an useful medicine for chronic diarrhea and dysentery.

### **Piles**

The jambul fruit is an effective food remedy for bleeding piles.

The fruit should be taken with salt every morning for two or three months in its season.

The use of the fruit in this manner in every season will effect radical cure and save the user from bleeding piles for entire life.

Fresh jambul fruit taken with honey is also an effective medicine for bleeding piles.

### Liver Disorders

Natural acids in the jambul fruit play an important role in the secretion of digestive enzymes and stimulate the liver functions. Charaka, the well-known physician of the ancient India, used this fruit in the treatment of enlargement of the liver.

### Female sterility

An infusion of the fresh tender leaves of jambul fruit, taken with honey or buttermilk, is an effective remedy for sterility and miscarriage due to overian or endometrium functional disorder.

The leaves presumably stimulate the secretion of progrestrone hormone and help absorption of vitamin E.

### **Precautions**

The jambul fruit should not be consumed in excess. Its excessive use is bad for throat and chest. It may cause cough and accumulation of sputum in the lungs.

#### RESEARCH

The jambul herbal remedy also seems to induce a very potent hypoglycemic action in the body according to clinical research conducted on the action of the herb in the body - this property of the herbal remedy is similar to the action of a number of other well known medicinal plants and results in the lowering of elevated blood glucose levels in the body of an affected person. For this reason the herbal jambul remedy is considered very valuable as a remedy for treating diabetes and glucose related problems. The level of glucose in the urine is also actively reduced by the jambul remedy.



Source: <a href="http://www.insomnia-cures.org/jamun.html">http://www.insomnia-cures.org/jamun.html</a>

Jamun herb Eugenia Jambolana

Jamun seed has gastro-protective properties mainly through promotion of mucosal defensive factors and antioxidant status and decreasing lipid peroxidation.

Jamun also has anti <u>cancer</u> and anti viral potential.

### Jamun fruit extract and breast cancer

## Eugenia jambolana Lam. berry extract inhibits growth and induces apoptosis of human breast cancer but not non-tumorigenic breast cells.

J Agric Food Chem. 2009 February. Li L, Adams LS, Chen S, Killian C, Ahmed A, Seeram NP. Department of Biomedical and Pharmaceutical Sciences, Bioactive Botanical Research Laboratory, College of Pharmacy, University of Rhode Island, Kingston, Rhode Island, USA.

### http://pubs.acs.org/doi/abs/10.1021/jf803407q

The ripe purple berries of the native Indian plant *Eugenia jambolana* Lam., known as Jamun, are popularly consumed and available in the United States in Florida and Hawaii.

Despite the growing body of data on the chemopreventive potential of edible berry extracts, there is paucity of such data for Jamun fruit.

Therefore our laboratory initiated the current study with the following objectives: (1) to prepare a standardized Jamun fruit extract (JFE) for biological studies and (2) to investigate the antiproliferative and pro-apoptotic effects of JFE in estrogen dependent/aromatase positive (MCF-7aro), and estrogen independent (MDA-MB-231) breast cancer cells, and in a normal/nontumorigenic (MCF-10A) breast cell line.

JFE was standardized to anthocyanin content using the pH differential method, and individual anthocyanins were identified by high performance liquid chromatography with ultraviolet (HPLC-UV) and tandem mass spectrometry (LC-MS/MS) methods.

JFE contained 3.5% anthocyanins (as cyanidin-3-glucoside equivalents) which occur as diglucosides of five anthocyanidins/aglycons: delphinidin, cyanidin, petunidin, peonidin and malvidin. In the proliferation assay, JFE was most effective against MCF-7aro (IC $_{50}$  = 27 µg/mL), followed by MDA-MB-231 (IC $_{50}$  = 40 µg/mL) breast cancer cells.

Importantly, JFE exhibited only mild antiproliferative effects against the normal MCF-10A (IC<sub>50</sub> > 100  $\mu$ g/mL) breast cells.

Similarly, JFE (at 200  $\mu g/mL$ ) exhibited pro-apoptotic effects against the MCF-7aro ( $p \le 0.05$ ) and the MDA-MB-231 ( $p \le 0.01$ ) breast cancer cells, but not toward the normal MCF-10A breast cells.

These studies suggest that JFE may have potential beneficial effects against breast cancer.

### Jamun has antiviral activity

### In vitro antiviral activity of plant extracts on goatpox virus replication.

Indian J Exp Biol. 2008 Feb; Bhanuprakash V, Hosamani M, Balamurugan V, Gandhale P, Naresh R, Swarup D, Singh RK. Division of Virology, Indian Veterinary Research Institute, Mukteswar 263 138, India.

Four plants having known medicinal properties were screened for inhibition of goatpox virus (GTPV) replication in vitro.

Of the 4 plants, extract of Acacia arabica (Babul) and Eugenia jambolana (Jamun) leaves had inhibition (%) 99.70 and 99.92 at their maximum non toxic concentrations, 99.93 +/- 0.38 and 1999.73 +/- 0.50 microg/ml, respectively in all cytopathic effect (CPE) inhibition assays.

Results indicated that the extract of Acacia arabica and Jamun leaves inhibited GTPV replication in vitro.

### Source:

### http://www.henriettesherbal.com/eclectic/kings/myrtus.html

Eugenia Jambolana, Lamarck (Syzygium Jambolanum, De Candolle; Calyptranthes Jambolana, Willdenow). Nat. Ord.—Myrtaceae. Jambul, Jamboo, Java plum.—

The seeds of this plant are reputed a remedy for *diabetes*.

The subacid fruit is largely eaten, and a vinegar prepared from it is regarded as carminative, stomachic, and diuretic.

The whole plant is astringent, the bark being employed where astringents are indicated.

The bark externally is fissured and gray; internally fibrous and red. It has a very astringent taste and the odor of oak-bark (Dymock).

The fruit is purple, of the shape and size of an olive, and excessively astringent unless altered by cultivation.

**The fruit** is employed in India in *bilious* diarrhoeas, sore throat, and ringworm.

**The seeds** have been highly lauded as a remedy for *diabetes*, the amount of sugar being appreciably reduced in a marvelously brief space of time, the patients at the same time being able to partake of amylaceous food without ill effects.

It appears, however, that the opinions as to the efficacy of this remedy are divided (see *Chemist and Druggist*, 1892, Vol. XLI, p. 319).

The seeds are nearly 1/2 inch long, and 1/3 inch wide, gray-black in color, cylindrical in shape, with one truncated and one dome-shaped extremity, very hard and nearly tasteless. Analysis by Mr. W. Elborne (1888) showed the presence of a trace of essential oil, fat, chlorophyll, gallic acid (1.65 per cent), colored extractive soluble in water, albumen, and resin soluble in ether and alcohol, all in small amounts, together with a large proportion of insoluble matter

(Pharm. Jour. Trans., Vol. XVIII, p. 921).

The fluid extract of the seeds is administered in doses of from 30 minims to 1 fluid drachm a day, beginning with 10-drop doses 3 times a day at first, and gradually increasing each day.

India. The flowers, leaves, and bark are used medicinally

**The bark** of jambosa root is astringent, and is used in India in *leucorrhoea*, *diarrhoea*, and *dysentery*. A minute portion of alkaloid (Lyons), a crystalline, non-glucosidal body *jambosin* (C<sub>10</sub>H<sub>15</sub>NO<sub>3</sub>), and an oleoresin have been found in it (A. W. Gerrard, *Pharm. Jour. Trans.*, 1884, Vol. XIV, p. 717).

The fruit is rose-flavored and pleasantly acid, and is known as rose-apple.

# Source: <a href="http://www.herbalcureindia.com/herbs/eugenia-jambolana.htm">http://www.herbalcureindia.com/herbs/eugenia-jambolana.htm</a>

Jambu is astringent, sweet and sour in taste, pungent in the post digestive effect and has cold potency.

It alleviates kapha and pitta dosa, but aggravates the vata dosa. It possesses heavy and dry attributes.

It is used in diseases like diarrhea, worms, asthma, dehydration, blood disorders and wounds.

The bark skin, fruits, leaves ad seeds of Jambu are used for medicinal purpose.

The plant is useful both, internally as well as externally.

The powder of bark skin, applied externally, effectively controls the bleeding.

In high fevers, to alleviate the burning sensation, the fruit pulp mixed with sesame oil is applied.

The oil medicated with jambu leaves, is beneficial in dermatoses.

The paste of seeds mashed in water, is the best medicament for acne as well as prickly heat.

Jambu with babbula and bakula is an effective gargle in stomatitis.

**Internally**, jambu is useful in varied ailments.

In optimum doses, the pulp of its fruit is valuable in **dyspepsia**, **anoresia**, **diarrhea and dysentery**.

In large doses, on the contrary, the pulp of fruits causes flatulence and dull abdominal pain.

The decoction of bark skin or the seed powder effectively controls diarrhea and dysentery.

The tender leaves juice, works well along with honey, to abate vomiting. The decoction of tender leaves, combined with honey. Renders excellent results in diarrhea, dysentery and colitis.

The fresh juice of the leaves accords styptic action in raktapitta and alleviates bleeding in diarrhea associated with bleeding and menorrhagia, the seed powder is preferred.

Jambu is benevolent in polyuria, as it reduces the urinary output. It combines well with jaggery to get rid of vitiated pitta conditions.

Jambu is a popular panacea in diabetes as an adjunct.

Source: <a href="http://www.stuartxchange.org/Duhat.html">http://www.stuartxchange.org/Duhat.html</a>

### **Constituents and properties**

• Gallic acid, 1.67%; tannin, 19%; volatile oil, 0.05 %; fat, 0.37%; antimellin; jambulol; olein; linolein; palmitin; stearin; phytosterin; myricyl alcohol;

hentriacontane.

• Considered astringent, stomachic, diuretic, anti-diabetic, anti-diarrheal.

### Parts used

Fruit and bark.



### **Uses**

### **Folkloric**

- Diarrhea: Liberal amounts of the fleshy portion of the fruit.
- Gum gingivitis: Use a 1% decoction of the bark as a gargle or mouthwash.
- Wounds: Use the bark decoction as an astringent wash.
- In India, seeds used for diabetes.
- Bark used for sore throats, indigestion, appetite loss, leucorrhea, bronchitis, asthma, ulcers and dysentery.

#### Others

· Wine and fruit drink from the ripe fruits. Seeds used for fodder.

# Source: <a href="http://www.henriettesherbal.com/eclectic/boericke/syzygium.html">http://www.henriettesherbal.com/eclectic/boericke/syzygium.html</a>

### Syzygium jambolanum, Jambol Seeds.

Enlexing, active principle.

Has an immediate effect of increasing the blood sugar, glycosuria results. A most useful remedy in diabetes mellitus. No other remedy causes in so marked degree the diminution and disappearance of sugar in the urine. Prickly heat in upper part of the body; small red pimples itch violently.

Great thirsts, weakness, emaciation. Very large amount of urine, specific gravity high. Old ulcers of skin. Diabetic ulceration. The seeds powdered, ten grains three times a day; also the tincture.

**Relationship.-**-Compare: *Insulin*-An aqueous solution of an active principle from pancreas which affects sugar metabolism. If administered at suitable intervals in diabetes mellitus, the blood sugar is maintained at a normal level and the urine remains free of sugar. Overdosage is followed by weakness and fatigue and tremulousness and profuse sweating.

Boericke's Materia Medica, 1901, was written by William Boericke