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JAMUN: AN INDIGENOUS FRUIT THAT GROWS ACROSS INDIA

Traditional systems like Ayurveda and Unani use the jamun fruit to treat a number of ailments. Its hardy nature and excellent shade-giving properties also mean that the jamun tree can be grown extensively across India.



The Jambul (*Syzygium cumini*) is an evergreen tropical tree in the flowering plant family Myrtaceae, native to Bangladesh, India, Pakistan and Indonesia. It is also known as jamun in India and by other names like njaval, jamblang, black plum, damson plum, duhat plum, jambolan plum, java plum

or Portuguese plum, elsewhere.

Jamun is indigenous to India. It is generally grown as an avenue tree or as a wind breaker. It is a good source of iron (providing 1-2 mg per 100 grams) and vitamin C, and is useful in treating heart and liver ailments. The seed of the jamun is dried and powdered and is widely used in India to control diabetes.

In India, this large, evergreen tree is grown widely in the Gangetic plains and the Cauvery delta in Tamil Nadu. The tree bears fruit for 60 to 70 years, and the fruits ripen in June or July. It is known by several local names such as jambas, jamun, rajaman, kala jamun, neredu, naval, nerale hannu, jamali, etc.

The fruit is acidic and astringent in nature, with a sweet taste. Due to its acidic nature, it is usually eaten with a sprinkling of salt. Children are fond of this fruit as it colours the tongue purple due to anthocyanin, a plant pigment. Glucose and fructose are major sugars found in a ripe jamun. A medium-sized jamun provides about 3-4 calories.

Seasonality

Jamun trees start flowering from March to April. The flowers are fragrant and about 5 mm in diameter. The first fruits develop by May or June and resemble large berries. The tree continues to bear fruit through July.

The fruit is oblong, ovoid, starts out as green, then turns pink and, finally, a shining purple-black as it matures. A variant of the tree produces white-coloured fruit.

Climate and soil

The jamun is a hardy fruit and can be grown in poor soil and adverse climatic conditions. It thrives well in both tropical and sub-tropical regions. It requires dry weather at the time of flowering and fruit setting.

The jamun trees can be grown on a wide range of soils—calcareous, saline sodic soils and marshy areas. Deep loam and well-drained soils are, however, ideal. It does not thrive in very heavy and light sandy soils.

Varieties

There is no hybrid variety of the jamun for commercial cultivation. The most common type grown in north India is known as 'raja' jamun. This is a large-fruited variety, with oblong fruits of a deep purple colour. Another variety of jamun with large-sized fruits is known as 'paras' in Gujarat. And a seedless variety is grown in Varanasi.

Propagation

Jamun is propagated both by seeds as well as vegetatively. Narendra Jamun 6 is usually grown from seeds. The seeds have no dormancy; hence, fresh seeds can be sown (within 10-15 days) 4-5 cm deep in areas measuring 25 cm×15 cm. The seeds germinate 10-15 days after sowing. The seedlings are ready for transplantation in spring or the following monsoon.

Cultivation

Planting. Pits of 1 m×1 m×1 m in size are dug 10 m apart for seedling trees and 8 m apart for budded plants. Pit digging should be completed before the onset of the monsoon or spring season. The pits should be filled with a mixture of topsoil and well-rotten farmyard ma-

Nutritive Value per 100 grams of Jamun Fruit

Protein	–	0.7 g
Fat	–	0.3 g
Minerals	–	0.4 g
Fibre	–	0.9 g
Carbohydrates	–	14 g
Energy	–	62 Kcal
Calcium	–	15 mg
Iron	–	1.2 mg
Phosphorus	–	15 mg
Vitamin C	–	18 mg
Sodium	–	26.2 mg
Potassium	–	55 mg
Magnesium	–	35 mg
Oxalic acid	–	89 mg
Carotene	–	48 mg
Folic acid	–	3 mg

nure or compost in a 3:1 ratio. The monsoon season (July-September) is an ideal time of planting. But it can also be planted with a good survival rate in spring (February-March) if irrigation facilities are available. About 100-150 plants can be planted in a hectare of land.

Manuring and fertilisation.

In the pre-fruit-bearing period, 20-25 kg/year of well-rotten farmyard manure or plant compost should be applied. For fruit-bearing trees, this dose should be increased to about 50-60 kg/plant/year. The ideal time for applying organic manure is a month before flowering. For fully grown trees, 500 kg of nitrogen-fertilisers, and 300 g to 600 g of potassium fertilisers/plant/year should be applied. This should be spread under the canopy of the plant and mixed into the soil by hoeing.

Irrigation. The roots should be irrigated just after manuring. Young plants require 6-8 periods of irrigation per year for better growth. For fruit-bearing trees, irrigation should be done from September to October for better fruit bud formation and from May to June for better development of fruits. Normally, 5-6 periods of irrigation are required.

Harvesting and post-harvest management. Seedling trees start bearing fruit at the age of 9-10 years, whereas budded ones take 5-6 years. Flowering starts during March and continues up to April in north Indian conditions. Fruits ripen during June-July or with the onset of rains.

Nutritional properties

The jamun is a fairly good source of mineral salts and vitamin C, and provides 62 Kcal of energy per 100 g of edible fruit. It also contains a fairly good amount of carotene and folic acid (see Box).

Medicinal properties

In traditional medicine, the jamun plays a significant role.

1. Jamun is believed to be of special use in treating diabetes.
2. In the Unani and Ayurvedic systems, it is used to treat digestive disorders including diarrhoea. Seeds and leaves have been found to have a hypoglycaemic effect, decreasing blood sugar by 30 per cent and being effective in treating glycosuria (sugar in urine). This has been proved in trials conducted at CDRE, Lucknow.
3. The leaves and bark are used for controlling blood pressure and gingivitis.
4. Wine and vinegar are also made from the fruit. It is a good source of vitamin A and vitamin C.
5. The leaves have anti-bacterial properties and are used for strengthening teeth and gums.
6. The bark of the jamun tree has astringent, digestive, diuretic and anthelmintic properties, and is considered useful for throat problems.
7. Vinegar made from the fruit is administered in cases of enlarged spleen and urine retention.
8. For ringworm treatment, water-diluted juice is used as a lotion.

9. A decoction of the bark is used in cases of asthma and bronchitis. Gargling with this decoction is effective in treating mouth ulcerations, spongy gums and stomatitis.

10. To get relief from vomiting, one can take extracts of jamun leaves mixed in honey, twice a day.

11. Jamun leaves, stems, flower buds, opened blossoms and the bark have some antibiotic properties and hence work effectively as poultices on skin diseases.

Jamun products

Fresh jamun juice. Take 10 jamun fruits; chop and remove the seeds. Blend the fruits, strain them and pour into a glass. Add one teaspoon of honey and one teaspoon of lemon juice. Chill and serve for a really cooling drink.

Jamun fruit jam. Put 500 g of well-washed jamun fruits in a thick-

bottomed pan. Add just enough water to submerge them. Add half a teaspoon of citric acid and let them boil for 15 minutes.

Squeeze the juice out of the fruits into the water and sieve it. The seeds and skin will separate. Now, again boil the juice on medium flame along with sugar (half the weight of the juice extracted). Stir continuously till the juice thickens into a jam consistency. To check whether the juice has reached the right consistency, let a drop of the mixture fall into a glass of cold water. If the drop sinks to the bottom as a single blob, it signifies that the jam is ready. Remove from heat, cool and store in glass jars.

Jamun chips. These chips are natural strips made from sun-dried jamun fruit pulp. No artificial sugar, salt, essence or colour is added. These are good for diabetic patients.

Churan. The jamun fruit and

seed are dried with salt and preserved as a digestive powder.

Jamun fruits are highly perishable. They can be stored for only up to two days at ambient temperature. Pre-cooled fruits packed in perforated polythene bags can be stored for three weeks at 8-10°C and 85-95 per cent humidity. Fruits are normally packed in bamboo baskets and transported to local markets.

Jamun fruits can be processed into excellent quality fermented beverages such as vinegar and cider, and non-fermented ready-to-serve beverages and squashes. A good quality jelly can also be prepared from these fruits. As mentioned earlier, jamun seeds, too, have medicinal value. ■

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