

Terminalia Bellirica: A wonderful Medicinal Tree

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Summary

Terminalia bellirica is commonly known as Bahera belonging to family Combretaceae. It is mostly found in Dry-deciduous forests and outside the forests in other lands. Bahera, a large tree usually with a straight bole attaining a height of between 20 to 30 metres. Bark of the tree is bluish in colour. Leaves are alternate, broadly elliptic, dark green and glabrous. They have long petiole. The venation of leaves is reticulate with prominent midrib. Flowers are small pale greenish yellow, flowers appear along with new leaves and have strong pungent like smell. The seed of the tree is ovoid in shape. Fruits are generally dry fleshy drupe and grey in colour.. The tree is a common associate of Sal, Teak and other important species found in dry-deciduous forests.

Taxonomy

Family: Combretaceae

Kingdom: Plantae

Division: Magnoliophyta

Class: Magnoliopsida

Order: Mytrales

Genus: Terminalia

Species: bellirica

Medicinal Uses

- The fruit of *Terminalia bellirica* is one of the three constituents of 'Triphala churan' preparation along with two other *Emblca officinalis* (Aonla) and *Terminalia chebula* (Harad). It is used in various diseases and body disorders.
- Fruits are laxative, astringent, anthelmintic and antipyretic which are useful in hepatitis, bronchitis, asthma, dyspepsia, piles, diarrhea, cough and eye diseases.

- The decoction of the green fruit is used for cough. The pulp of the fruit is useful in diarrhea, leprosy and fever. Half ripe fruit is used as purgative. Kernel of the fruit is narcotic.
- Seed oil is used in rheumatism and hair problems. Gum of the bark is demulcent and purgative. The bark of the tree has been found diuretic and is very effective in urinary problems.
- The bahera has anti-mutagenic effects and is used in herbal digestive tonic for ruminants along with harad (*Terminalia chebula*). Its oil has been proved very effective in children suffering from oozing ears.

Chemical Constituents

The fruit of Bahera contain about 20-30 % of tannins and 40-45 % water soluble extractives. It contains various chemical constituents such as gallo-tannic acid, ellagic acid, phyllembin, ethyl gallate, galloyl glucose, mannitol, glucose, fructose and rhamnose. The seed contain non-edible oil. The tree produces a gum. It also contain most of the sugars are reported in Myrobalan.

Table: 1 Nutritional value found in Bahera

Nutrients	Value
Carbohydrates	20.26 ± 0.96
Fats	94.42 ± 0.63
Fibres	6.24 ± 1.62
Proteins	6.94 ± 0.03
Potassium	3.37 ± 0.11
Phosphorus	0.34 ± 0.018
Calcium	3.50 ± 0.30
Nitrogen	3.40 ± 0.06
Zinc	50.83 ± 1.32
Sodium	2.34 ± 0.21
Iron	294.06 ± 24.05
Copper	65.06 ± 0.84
Magnesium	0.36 ± 0.01

Cultural Practices

- ✚ **Climate:** The Bahera show its luxuriant growth the absolute maximum temperature lies between 36 to 46 degree Celsius and minimum temperature varies from 1 to 15 degree Celsius. It requires normal rainfall about 1000 to 3000 mm.
- ✚ **Soil :** It has capability of growing in a variety of soils having texture from loamy sand or sandy loam to silty loam. The soil must be good moisture content. It gives better result when grown in moist, deep, sandy loam soil.

Conclusion

Traditional medicine have been identified and used throughout human history. Bahera tree population is reducing especially from the forests due to its over exploitation. The fruit extract of bahera tree has been found to possess anti-bacterial properties. It is also found to contain constituents such as glucoside, gallo-tannic acid, colouring matter, resins and greenish yellow oil. These constituents are believed to be responsible for pharmacological activities such as anti-microbial, anti-oxidant, hepatoprotective, antispasmodic and bronchodilatory activities. Therefore, this plant is significantly used for the treatment of various diseases. Further, this plant species should be screened in future for new medicinal properties.